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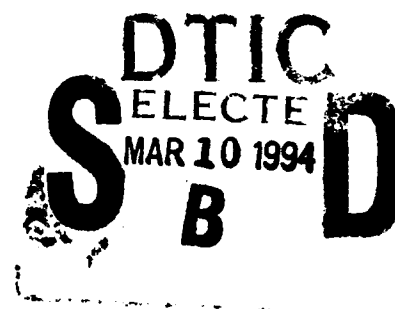
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THESIS

A REPORT ON BASE REUSE PLANNING
AT THE
TUSTIN MARINE CORPS AIR STATION

by

David Marshall Robinson

December, 1993

Thesis Co-Advisor:
Thesis Co-Advisor:

Lawrence R. Jones
Katsuaki L. Terasawa

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A Report on Base Reuse Planning
at the
Tustin Marine Corps Air Station

by

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Submitted in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL

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ABSTRACT

This report documents and examines the base closure and reuse planning process at the Tustin Marine Corps Air Station. A brief background discussion of base closure and reuse planning since 1960 is presented, followed by a chronology of events as they occurred at MCAS Tustin gathered primarily from personal interviews with participants. Key factors influencing the reuse planning process also are discussed. An illustrative economic analysis of various reuse alternatives and their effect on social welfare is presented, including an analysis of potential effects from the Presidentially proposed Community Reinvestment Program. The most significant outcome of the MCAS Tustin reuse planning process has been the forward looking approach taken by the City of Tustin and the Marine Corps toward requirements of the McKinney Act and preparation of the Environmental Impact Report/Environmental Impact Statement.

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INTRODUCTION

Base closures offer the nation a once-in-a-lifetime opportunity to improve metropolitan areas and to take important steps forward in the areas of economic development, housing, and quality of life.¹

Since the forming of the first Defense Secretary's Commission on Base Realignment and Closure in 1988, over 150 military bases have been scheduled for or recommended for closure in the United States. Some of these bases will be given to other federal agencies for reuse, some to state government, but others will be returned to the local communities that have supported the military bases and their operations over the years.

One such base is the Marine Corps Air Station Tustin (MCAS Tustin), located in Tustin, California. The City of Tustin (City), almost completely surrounding the base, has the opportunity to take the actions described in the above quote. They are in a position to shape the future uses of the site and have a profound impact on the economic health of their community. To accomplish this task, the City and the United States Marine Corps (USMC) have entered into a unique cooperative arrangement for conducting reuse planning, which has enabled the process to proceed quickly and smoothly.

At the same time that the City is looking at potential reuses of MCAS Tustin, the Clinton Administration is trying to make the process faster, easier, and advantageous for the local communities. On July 2, 1993, President Clinton introduced a five-part program to speed the base closure process. This program included a proposal clearing the way for communities to obtain former military bases at a discount of up to 100% when used for economic development.²

PURPOSE OF THE REPORT

The purpose of this report is twofold:

- Document and examine the base closure and reuse planning process at MCAS Tustin drawing conclusions and lessons learned from the events.
- Illustrate and analyze the potential economic effects of the Jobs-Centered Property Disposal Plan presented in the President's Community Reinvestment Program.

IMPORTANCE OF THE REPORT

Base closures are a new way of life for most personnel in the military today. Although many bases have been closed over the years, it has been two decades since the Department of Defense (DoD) has dealt with so many at one time. By documenting and discussing the process of base closure and reuse planning, as it has unfolded to date at MCAS Tustin, officials at other military bases scheduled to close, or in jeopardy of closing, can learn from the successes and mistakes made during the process. By using these lessons, military officials can help to streamline otherwise cumbersome and difficult decisions.

Public policy decisions affect the lives of millions of people every day. Analyzing the effects that these decisions have on the economic well-being of society gives policy makers and their critics ammunition to debate the issues and make informed decisions. Furthermore, since the proposed property disposal plan has only recently been introduced, the discussion gives students of public policy and economics a starting point for future debate on this issue.

SCOPE AND METHODOLOGY

This report begins with a brief discussion of base closure and reuse planning since 1960, examining selected works written to assist communities with this task. The ensuing chronology of events, as they occurred at MCAS Tustin, have been gleaned primarily from personal interviews with key

participants. Also, discussion of key factors influencing the process is presented.

Because the reuse planning effort at MCAS Tustin is still ongoing, this report will neither recount nor draw conclusions about the final outcome of the process. Events occurring after October 1, 1993 will need to be the subject of further study. Since the primary focus of the report is the closure of MCAS Tustin, neither a comprehensive history of base closures nor an extensive examination of the literature is provided.

The policy/economics analysis includes a quantitative examination of the proposed Jobs-Centered Property Disposal Plan and its effects on social welfare. It is based, in part, on assumptions about the final Tustin reuse plan due to be completed in April 1994. The discussion is supplemented by graphs and tables to support and illustrate the points examined.

Conclusions and lessons learned from this study of the reuse planning process are presented along with recommendations for further study. An executive summary follows this chapter.

EXECUTIVE SUMMARY

BACKGROUND INFORMATION

During the 1960's and early 1970's many military bases were closed in an effort to reduce overhead in the Department of Defense. However, from 1977 to 1988, the DoD did not close any military installations, due, primarily to three important factors: build-ups in defense spending, requirements to comply with the National Environmental Policy Act, and required Congressional approval for closure action.

Even though no bases were closed in this period, there was a growing interest in cost control and improving cost effectiveness in DoD by the mid-1980's. As personnel drawdowns occurred, the DoD needed fewer bases to support the force structure. End strength reductions were fueled by the worldwide decline in communism, the end of the Cold War, and declining defense budgets.

The current base closure process began with recognition of the need to better align military infrastructure with defense resources. In 1988, the Defense Secretary's Commission on Base Realignment and Closure recommended that 86 bases be closed. The estimated savings generated by the closures were \$693.6 million per year with a total 20 year savings of \$5.6 billion. Since then, the Commission has met twice more, increasing the total number of bases scheduled for closure to over 150.

THE TUSTIN EXPERIENCE

In April of 1991, the Secretary of Defense made recommendations to the Commission for the second round of base realignments and closures. Included among a list of 38 Department of the Navy candidates was MCAS Tustin. The City of Tustin and the United States Marine Corps then participated in a joint cooperative reuse planning effort.

Initial Posture

The plan to close MCAS Tustin included relocating the units assigned there to both Camp Pendleton and to a new air facility to be constructed at the Marine Corps Base, Twenty-nine Palms, California. The Marine Corps was also directed to seek special legislation permitting them to offer the property at MCAS Tustin in trade to a developer willing to construct the new facility at 29 Palms. In addition, military housing units at MCAS Tustin were to be retained for use by MCAS El Toro.

The closure announcement was a complete shock to the City of Tustin. However, based on advice received, they opted not to fight the closure and instead aggressively planned its reuse. The Marine Corps had an interest in early reuse planning because of concern over development adjacent to military housing and the necessity of identifying developers willing to build facilities at the Marine Corps' base at 29 Palms.

Organizational Structures

The City quickly organized a seventeen member task force consisting of elected and appointed City officials, local business leaders, community leaders, military officials, and

representatives from surrounding communities. The Task Force was directed to study reuse issues and make recommendations to the City Council. Recognizing that decisions made about base reuse would have impact on neighboring communities, these communities were invited to participate in the reuse planning process.

Marine Corps officials recognized the need to establish a separate Base Realignment and Closure (BRAC) entity for the closure effort. A newly formed BRAC Office was tasked as the single point of contact for the Command on all BRAC matters. This was a new organization to the Marine Corps and to the Department of the Navy, with no precedent in this area.

The Navy initially became involved in the Tustin closure because primary responsibility for the Installation Restoration program rests with the Naval Facilities Engineering Command (NAVFAC). The Environmental Division of the Southwest Division, NAVFAC (SWDIV) has a separate branch devoted to environmental problems related to closing bases. When MCAS Tustin was identified for closure, this branch took control of managing its environmental program. In addition, the Marine Corps chose to contract with SWDIV for real estate disposal services. Their in-house expertise and the requirement to follow Navy property disposal procedures made SWDIV the logical choice.

The Process Begins

The City and the Marine Corps agreed it was in their best interest to work together in a cooperative arrangement expediting the reuse planning process. A Memorandum of Understanding (MOU) was signed formalizing this relationship. The primary focus of the MOU is the preparation of a joint

Environmental Impact Report/Environmental Impact Statement (EIR/EIS), and concurrent preparation of a Specific Plan for the Reuse Area. This marks the first time that a community and a military base have joined forces to prepare a single EIR/EIS and the Specific Plan for a closing base.

The City, with Marine Corps assistance, requested a \$750,000 grant from the Office of Economic Adjustment to pay for the variety of studies necessary to make informed decisions on base reuse. The request was denied. The Marine Corps responded by providing \$750,000 of their operating budget to the OEA, who in turn passed it on to the City. Without the Marine Corps assistance, studies and subsequent reuse decisions would have been delayed until other financing sources were identified.

The MOU designated the City and the Marine Corps as joint lead agencies for base reuse planning process. This arrangement gives the City sole control of the property's reuse once the Marine Corps leaves, and enables the Marine Corps to keep the process moving in a timely manner.

Soon after the consultant was hired to conduct the studies, a Vision Statement was adopted by the Task Force. The Vision Statement provides long term direction to the reuse planning process. It ensures certain core values, considered important to the community, predominate even as the details of the final plan change over time.

To incorporate public input into the reuse process, 26,000 public opinion questionnaires were distributed throughout the community and the base. Residents were asked to indicate their level of concern about potential issues associated with base reuse and their level of support for various uses of the

property. Results of the survey indicated that cleanup of hazardous waste on the base was the primary public concern. Other issues included maintaining the character and identity of Tustin, adequate roadways, positive financial impacts, and noise reduction.

Factors Influencing the Reuse Plan

Current law directs the Secretary of Defense to conduct an environmental restoration program at all defense facilities including those identified for closure. The Environmental Division, SWDIV, has begun preliminary studies to determine the extent of the contamination aboard MCAS Tustin. The preliminary assessment and site inspection indicated primarily petroleum based substances in the soil. Few solvents were discovered, lessening the problem from both a cleanup and funding perspective. The highest concentration of contaminants is in the center area of the base while the parcels along the boundaries are relatively clean. The estimated cost to clean MCAS Tustin is approximately \$75 million.

When considering possible reuses for the property, the City must take into account the type and extent of contamination. According to City officials, their planning efforts take into account the levels of contamination identified so far. The City's intention is to zone the most toxic areas for some future use anticipating that they are likely to be transferred last.

The question of "how clean is clean?" is an often debated issue by everyone involved in environmental issues. For closing bases, the issue of cleanup standards is complicated for several reasons. First, the Community Environmental

Response Facilitation Act (CERFA), requires the government to remain responsible for conducting any remedial action, even after the base closes. Second, it is not clear what type or level of remedial action is required.

At the beginning of the reuse planning process the Marine Corps agreed to let the final reuse plan drive the cleanup effort. Originally, SWDIV agreed that the reuse plan would be a significant factor when planning environmental restoration at MCAS Tustin. Subsequently, this policy changed twice over a two month period.

CERFA requires federal agencies to identify parcels already considered clean allowing agencies to transfer these sites prior to finishing cleanup at others. At MCAS Tustin, SWDIV has begun the process of identifying the clean sites enabling early development planning of these areas.

Prior to transferring military bases to local developers, DoD officials must first offer the property to other agencies within the DoD, other federal agencies, advocates for the homeless, and to state and local agencies. If these agencies have legitimate uses for the property, the DoD can convey the land and facilities to them at no cost. Although there was an initial interest by the Federal Bureau of Prisons in the property, it has since died down and there have been no other significant requests for the property.

The Stewart B. McKinney Homeless Assistance Act (McKinney Act) requires agencies to identify excess property and facilities for possible use by the homeless no earlier than eighteen months prior to closing the base. Because of the timing of the screening for homeless requirements, the potential for disruption to the reuse planning process exists.

The City took a proactive approach to this problem. Instead of waiting for SWDIV to contact HUD and other agencies who might have an interest in MCAS Tustin, they informally contacted these agencies themselves and incorporated their potential needs into the reuse plan.

The City must consider the financial implications of reuse decisions on their own resources and Marine Corps Operations and Maintenance (O&M) funding. Care must be taken not to be unreasonable when choosing reuse options at a particularly contaminated site. If reuse decisions are contested by the Marine Corps because of the cost of restoration, the process can be slowed down considerably.

Two of the original blimp hangars built by the Navy during World War II are still in use by the Marine Corps today. The blimp hangars are of particular interest to the Reuse Planning Task Force for several reasons: each is listed on the National Register of Historic Places; the annual cost of maintaining each hangar is approximately \$500,000; the results of the public opinion survey indicate strong support for saving at least one of the hangars; the immense size of the hangars shapes the use of the surrounding area.

Initial market demand studies indicate relatively low demand for residential and commercial property over the next two decades. In addition, prediction show only moderate demand for industrial and research and development (R&D) space and virtually no demand for retail space or new visitor accommodations. Factors contributing to weak demand include:

- Slow population growth projections
- Increased number of persons per household
- Slowing of economic development

- Overbuilt office space with increased office vacancy rate
- Uncertainties in the California economy
- Poor images of the California business conditions
- High cost of redeveloping dense aircraft runways

Alternative Reuse Plans

The consultant presented the Task Force with three draft alternatives for the master reuse plan that were concept oriented, and intended to generate broad term discussion about types of development desired. One plan, sensitive to regional needs and low market demand, included a waterfront area designed to integrate business, residential, and recreational areas with its unique circular road system. The second was oriented toward maximizing revenues with as much business as could be accommodated and little recreational area. The third was a compromise between the first two extremes incorporating features of each. The Task Force provided the consultant with comments and recommendations and revisions are currently being drafted.

Changes in the Situation

While conducting this research, three events occurred which had a significant impact on the reuse planning process. First, the 1993 BRAC Commission recommended MCAS El Toro for closure. Second, SWDIV announced a major change in their environmental cleanup policy significantly reducing the amount of restoration planned at MCAS Tustin. Finally, President Clinton announced a new program designed to speed up the economic recovery of communities affected by base closures.

The BRAC-93 decision included housing areas at MCAS Tustin that were to be retained by MCAS El Toro and that will now

become available to the community. Introducing existing military housing into the civilian residential market too quickly can have detrimental economic effects on residential property values in the surrounding area.

As a result of BRAC-93, jurisdictional lines between the cities of Irvine and Tustin are not as clear. Approximately 70 acres of the housing area at MCAS Tustin are within the city limits of Irvine, California. Previously, the surrounding communities had only a passing interest in the reuse planning. Now, with part of the reuse area in the jurisdiction of another municipality, there is potential for delay. The City of Tustin has attempted to solidify their position as lead agency in reuse planning, by sending a letter to the Marine Corps requesting confirmation of their status as lead planning agency. Marine Corps officials declined to become involved in this sensitive political negotiation.

The potential reuse of MCAS El Toro creates a problem for planners at Tustin. Its closure not only adds 300 acres to the Tustin reuse plan but also introduces an additional 4000 to 5000 acres of property into an already depressed market. If the base becomes a commercial airport, its closure will have a positive effect on the reuse of MCAS Tustin. If it is not used as an airport, its reuse options are similar to those of MCAS Tustin. The properties would be in direct competition for the same slow market. In addition, jurisdictional lines are not as clear for MCAS El Toro. Several different groups are vying for lead agency status and there is potential for lawsuits over control of reuse planning. The outcome will have an effect on the reuse effort in Tustin.

As a result of the BRAC-93 decision, that directed major changes to the MCAS Tustin closure, BRAC officials must decide

whether MCAS Tustin will close by 1997, as previously required, or in 1999 along with the other BRAC-93 closures. Closing both bases in 1999 is the best solution for the Marine Corps but causes problems for the City. With only four years remaining in the six year time schedule for closure, closing the base in 1999 along with MCAS El Toro gives the Marine Corps time to carefully reevaluate its plan and make an orderly transition to new facilities.

Closing both bases in 1999 creates problems for the City. First, delays in transferring the property may cause businesses and developers to look to other areas for new projects. Second, a delay in the closure date may invalidate the studies conducted in support of their current reuse planning effort. Third, delays executing the reuse plan create potential for jurisdictional challenges from other communities. The best solution for the City is to close the entire base in 1997. Specific Plan can easily be modified to include the extra 300 acres, and in support of the plan remain valid.

According to BRAC officials at MCAS El Toro, a recent decision was made extending the closure deadline for all portions of MCAS Tustin to 1999. However, it is the Command's intention to discontinue operations at the site by 1997 and transfer the property as rapidly as possible.

Closure of MCAS El Toro eliminates the need to keep Tustin housing areas and therefore erases any Marine Corps interest in adjacent development. However, Marine Corps officials have made it clear to the City that they are not ending their involvement in the reuse planning effort. This continued involvement in reuse planning is good policy and shows support

to a community which has supported the Marine Corps for over forty-two years.

In August 1993, SWDIV announced a change to their policy on environmental restoration explaining that environmental studies would be conducted using residential cleanup values but actual restoration only meet standards required for current land use. The announcement has significant impact on reuse planning because the base property is primarily used for light industrial purposes. If the military will not allow reuse planning to dictate the level of restoration, the property becomes less attractive to developers and the City may be required to revise its final reuse plan. However, this policy decision was short lived.

On July 2, 1993, President Clinton announced the Community Reinvestment Program designed to speed the base closure process so that swift economic recovery and reuse of bases occurs. The program has a single goal: "Rapid Redevelopment and Creation of New Jobs in Base Closure Communities," and its five points include:

- Jobs-Centered Property Disposal
- Fast-Track Cleanup
- Designated Transition Coordinators
- Easy Access to Transition and Redevelopment Help
- Larger Economic Development Planning Grants

Reuse planning at MCAS Tustin has been most affected by the first two parts. The Jobs-Centered Property Disposal Plan includes job creation on the list of eligible uses for which the DoD can convey excess property to the community. In addition, several methods for streamlining the property disposal process have been outlined and include:

- use of interim leases
- delegation of approval authority
- speeding the federal screening process, including timely identification of requirements from homeless assistance providers
- and most controversially, transfer of personal property along with real property

The Marine Corps does not consider the last element feasible. Unlike other military units, the units stationed at both MCAS Tustin and at MCAS El Toro are relocating not disestablished. If the Marine Corps must transfer all or some of its personal property, replacement equipment will be required further draining the O&M funding accounts. This issue is currently being discussed by Marine Corps officials but has yet to be resolved.

The Fast-Track Cleanup Plan outlines ways to accelerate the environmental restoration process. Elements of the plan include establishing a Cleanup Team at each base on the National Priorities List (NPL), improving the process of identifying clean parcels, consolidating NEPA requirements, and rescinding overly restrictive legislation.

The Fast-Track Cleanup has an immediate effect on reuse planning by reversing the SWDIV environmental cleanup policy change and further stating that the programs will be based on local reuse plans. The proposal to consolidate NEPA requirements is exactly what the Marine Corps and the City of Tustin accomplished by preparing a single EIR/EIS.

Current legislation holds the federal government responsible for clean all contamination at former military bases forever regardless of its origin. In July 1993, the President signed the 1993 Supplemental Appropriation Act which

ensures the DoD is only responsible for contamination it caused. This will speed opening certain parcels of the base to tenants earlier than planned allowing the City to begin its economic recovery.

ECONOMIC IMPACTS OF PROPERTY DISPOSAL

In general, as the supply of land increases in the existing market, the quantity demanded increase and the price decreases. In addition, there is an effect on overall social welfare. In this report, the effects of several property disposal options are examined.

If a portion of the land is conveyed for public use and the rest fenced, delaying transfer until environmental restoration is complete, the result is a loss to net revenue. In addition, the DoD incurs the highest possible cleanup cost by exercising this land use option. To the extent that restoration is conducted independent of reuse option chosen, this policy is inefficient from a social welfare perspective.

If the disposal objective is to maximize net social welfare within the resource constraint of 1500 acres, the opportunity cost of residential property, or sales price minus restoration cost, is equated to the opportunity cost of commercial/industrial property. When opportunity costs are equal, consumers are indifferent as to which type is offered for sale and net social welfare is maximized.

If the government is interested in maximizing net revenues, the marginal profit of each type of property must be equated. Marginal profit is marginal revenue minus the marginal cost of restoration. When marginal profits are the same, the DoD is indifferent toward reuse alternatives and

will not prefer the sale of one over the other. At this point net return is maximized.

If the property is conveyed to the City, it may choose to maximize its total revenue. This option is similar to maximizing net federal revenue except that marginal cost to the City is zero since the DoD remains responsible for cleaning environmental contamination. Therefore, the City can maximize its revenue by equating the marginal revenues of residential and commercial/industrial property. This option increases restoration costs to the federal government and decreases social welfare.

SUMMARY

The reuse planning process at MCAS Tustin has been largely successful. The most significant success has been the forward looking approach taken by the community and the Marine Corps toward the McKinney Act and the EIR/EIS preparation. Other areas of success include the use of a joint task force approach to reuse planning and the establishment of the BRAC Office to handle all BRAC matters.

Although the experience has generally been positive, there are a few problem areas which should be addressed. These include: the speed at which environmental studies are conducted; prioritization of environmental funding; relationships between SWDIV and the Marine Corps with regard to BRAC issues; and the tendency of the City to take a short range perspective toward creative reuse alternatives.

MCAS Tustin was the first major Marine Corps base to close as a result of BRAC legislation. It has become a test case for the Marine Corps which provides lessons for future

closures. Clearly, base reuse planners at MCAS Tustin have been very successful.

BACKGROUND INFORMATION

PRE-1977

Military base closures are not new for the DoD. In the early 1960's, bases were closed in an effort to reduce overhead. Many of these bases were built as temporary facilities during the World Wars and were considered obsolete. During this early period, the DoD Office of Economic Adjustment (OEA) was established to assist communities dealing with impacts on local economies as a result of defense cutbacks.³

Again in the early 1970's, after the end of the Vietnam War, many more bases were closed by the Secretary of Defense (SecDef). Bases were declared surplus or excess by the DoD and disposed of by the General Services Administration (GSA). Many members of Congress, during this time, felt that base closures were used as a weapon against legislators who did not support the Administration.⁴ This perception was widespread enough to prompt several changes in the law affecting the base closure process. These changes are outlined in the next section.

A Reuse Planning Handbook

Up to the mid-1970's, little was written on base reuse planning to help affected communities. In 1974, the Economic Development Administration, of the U. S. Department of Commerce, recognizing a need, published a handbook to assist communities converting deactivated military installations into civilian use.

This handbook, entitled Guide For Communities Planning Civilian Reuse of Defense Installations, was written as a reference guide for community officials and others involved in the conversion process. It covered four areas:⁵

- Organizing the reuse effort
- The process of property transfer
- Reuse planning
- Organization of the takeover entity

The manual contains some useful information, however, it is somewhat dated. For example, the manual contains only one paragraph concerning environmental cleanup. Today, the environmental effects of base closings are the subject of numerous studies and volumes of reports. Although the handbook does not specify a time line for the closure and disposal process, the reader is left with the impression that closures are completed relatively quickly.

The manual does recognize some important factors to consider when planning the reuse of a military base. Examples include the necessity of early planning and organization, and the importance of limiting the flow of newly acquired base housing into the civilian real estate market. In addition, the manual recognizes problems associated with the political dynamics prevalent during reuse planning. Specifically, advice on dealing with jurisdictional conflicts between affected communities and counties is presented.

For its time, this manual was appropriate. However, changing legislation, new environmental concerns, and the fact that each military service handles its own property disposal, indicates that more information is necessary for affected communities.

1977 TO THE PRESENT

From the years 1977 to 1988, the DoD did not close any military installations, due, primarily to three important factors:⁶

- The Carter Administration proposed and the Reagan Administration initiated a build-up in defense spending and increased policy emphasis on national security.
- Legislation⁷ requiring the military departments to prepare environmental impact statements (EIS's) for each of the closing bases in compliance with the National Environmental Policy Act (NEPA).
- Legislation⁸ requiring the DoD to obtain Congressional approval before closing any installation.

Even though no bases were being shut down in this period, there was a growing interest in cost control and improving cost effectiveness in DoD by the mid-1980's. Both the President's Private Sector Survey on Cost Control (The Grace Commission) in 1983 and Senator Barry Goldwater in 1985 emphasized a need to improve the DoD's cost effectiveness by improving its military base composition.⁹

The situation changed during the latter years of the decade. The late-1980's were marked by declining defense budgets. Recognizing the need to better align military infrastructure with defense resources, the Congress worked with the SecDef to create a method to streamline the base closure process. The resulting Defense Secretary's Commission on Base Realignment and Closure (Commission) subsequently recommended that 145 bases be closed or realigned. The estimated savings generated by the closures were \$693.6 million per year with a total 20 year savings of \$5.6 billion.¹⁰ Subsequent passage of the Defense Base Closure and Realignment Act of 1990 (Base Closure Act), ensured that base closures would be revisited in 1991, 1993, and 1995.

As personnel drawdowns occurred, the DoD needed fewer bases to support the force structure. End strength reductions were fueled by the worldwide decline in communism, the end of the Cold War, and declining defense budgets. Secretary of Defense, Les Aspin recently commented on this situation,

Closing bases supports military effectiveness by allowing us to spend money on things we need and not on things we don't. And closing bases supports the investment necessary to foster economic growth.¹¹

Published Guidance

In spite of the fact that no new closings were initiated from 1977 to 1988, the OEA continued to publish information helpful to communities experiencing base closings previously authorized. This information included titles such as Acquiring Former Military Bases (1978), Communities in Transition (1978), and Planning Civilian Reuse of Former Military Bases (1978). The latter of these publications was republished in 1989 after the Commission made its 1988 base closure recommendations, and a supplement was then published to revise it in 1990. Together these two publications offer the most current information to communities dealing with a closure.

Planning Civilian Reuse of Former Military Bases and its supplement offer communities advice on the reuse planning process, property development strategy, property acquisition and management, and redesigning the base facilities. The manuals draw heavily on the experiences of communities which have successfully converted former military bases to civilian use since 1961.¹²

Even though these publications are the most current information available in print, they fail to capture the most recent changes in base closure legislation or new policies affecting base closure proposed by the Clinton Administration. Nevertheless, these manuals are a good source of information and are currently in use by planners developing reuse alternatives for MCAS Tustin.

Recognizing the environmental condition of military installations as a major factor in the base closing and reuse decision making process, the Department of the Army published

a manual entitled Base Realignment and Closure 'How-to' Manual for Compliance with the National Environmental Policy Act. This 1991 document provides "practical guidance" to organizations conducting environmental analysis prior to closing an installation. It is written for personnel at several levels of authority from the Department of the Army Headquarters, to the major command, as well as for personnel at the installation level preparing the required documents.¹³

In addition to the works mentioned, periodicals such as Urban Land, American City & County, and The Military Engineer have published articles in recent years providing advice and perspective on the base closure process. Opportunities that base closings offer to a community are the predominant theme of these articles. In addition, newspapers across the nation, especially those in the affected communities, have printed a myriad of articles documenting base closures and their consequences.

THE TUSTIN EXPERIENCE

In April of 1991, as required by the Base Closure Act, the Secretary of Defense made recommendations to the Commission for the second round of base realignments and closures (BRAC-91). Included among a list of 38 Department of the Navy (DoN) candidates for closure or realignment was MCAS Tustin. This action sparked a unique situation in the history of base closures. The City of Tustin and the United States Marine Corps participated in a joint cooperative effort to plan for and expedite the process of closing MCAS Tustin.

This chapter examines this one-of-a-kind arrangement between the City and the Marine Corps. Particular attention is given to how this arrangement has affected the reuse planning process. This includes organizational structures of the key participants, organizational relationships, factors and events influencing the process, and reactions to changing situations by the parties involved. In addition, areas of concern and areas of achievement are noted.

INITIAL POSTURE

Tustin Background

Originally built in 1942 to support Navy blimp operations during World War Two, the Tustin Marine Corps Air Station has been in continuous operation since 1951. The base is currently home to the helicopter arm of the Third Marine Corps Air Wing (3RD MAW). It, and the neighboring Marine Corps Air Station El Toro (MCAS El Toro), provide helicopter and fixed-wing air support to Marine Corps units throughout Southern California.

MCAS Tustin consists of approximately 1,500 acres of land, of which, all but approximately 73 acres are located within the city limits of Tustin, California. Significant facilities aboard the base include:¹⁴

- 1,539 family housing units
- 171 buildings comprising 1,982,000 square feet of space
- 13 miles of roads
- Two blimp hangars (measuring 7 acres of interior space each)
- 3,000 feet of aircraft runway
- Support hangars and aircraft parking aprons

The blimp hangars are significant, not only because of their immense size, but each is listed on the National Register of Historic Places. As will be discussed in a later section, both of these factors present problems to the community.

The 29 Palms Plan

The plan to close MCAS Tustin, as directed by the Commission, included relocating the units assigned there to both Camp Pendleton and to a new air facility to be constructed at the Marine Corps Base, Twenty-nine Palms, California (29 Palms). The Commission also directed the Marine Corps to seek special legislation permitting them to offer the property at MCAS Tustin in trade to a developer willing to construct the new facility at 29 Palms.¹⁵

Under this plan, certain portions of MCAS Tustin were to be retained for use by MCAS El Toro. Specifically, military housing units and several facilities in support of those units were to remain under Marine Corps control. The retained area totaled approximately 300 acres, primarily along the northern and eastern boundaries of the base. The remaining 1200 acres are located completely within the Tustin city limits.¹⁶

Initial Shock

The process of reuse planning started for the City with the announcement by the SecDef recommending the BRAC-91 closures. This announcement was a complete surprise to the City who apparently had no idea that closure of MCAS Tustin was considered a possibility.¹⁷

After the initial shock of the announcement, the City began to explore what base closure meant. They surveyed officials from other communities which had been involved in base closures, the OEA, and the Marine Corps. The inquiries were conducted to find out what the closure process was, what actions the City should be taking, and most importantly, whether they should try to fight the closure.¹⁸

On this last point, the City received unanimous recommendations from the OEA, Congressional representatives, and other community leaders not to fight the closure. Their position was that no matter how much money the City spent trying to save the base, it was likely they would lose the fight anyway. In addition, the City was told that even if they won, the base might still end up on one of the next two rounds of base closures scheduled for 1993 and 1995.¹⁹

This position is supported by the editor of Base Conversion News, Jim Wake, who was quoted as saying,

One thing communities should not do is spend all their time convincing anyone with the ability to reverse the decision to do so. This is usually going to fail, will waste energy and time and delay economic development.²⁰

Based on the advice received, City leaders decided not to resist the closure. Instead, they concentrated their efforts on reuse planning and began a campaign to convince the community that this decision was in their overall best interest.²¹

Marine Corps Interest in Tustin

The Marine Corps had a keen interest in the reuse planning effort for two reasons. First, officials at MCAS El Toro were concerned about what type of development would take place on property adjacent to the retained military housing. Compatible development in these areas was desired so as not to degrade the quality of life for military families living in government quarters.²²

Secondly, according to the Base Closure Act, bases scheduled to close have six years to complete the closure action. For the Marine Corps, this meant new facilities at both 29 Palms and Camp Pendleton must be completed prior to the six year limit. The Marine Corps had a tight time line to contract for, construct, and move into a new location.

Accordingly, the Marine Corps was very interested in finding a developer who would be willing to make the land-for-construction exchange in a timely manner. The sooner zoning decisions were made by the City, the sooner interested developers would be willing to commit to the plan. Therefore, the Marine Corps became an active participant in the community's reuse planning process.

ORGANIZATIONAL STRUCTURES

The City

One of the first things the City did in response to the closure announcement was organize a seventeen member task force to study reuse issues and make recommendations to the City Council. The task force approach had been successful in other communities surveyed by the City. The decision to build this team was made with full understanding that final decisions about the reuse of the base rested with the City Council. The Task Force consisted of both elected and appointed City officials, local business leaders, community

leaders, military officials, and representatives from surrounding communities.²³

Even though the portion of the base to be vacated by the Marine Corps was completely surrounded by the Tustin city limits, and there were no apparent jurisdictional conflicts at the time, the City recognized that decisions made about base reuse would have some impact on neighboring communities. Therefore, these communities were invited to participate in the reuse planning process by providing representation to the Task Force.²⁴

The Marine Corps

During these early stages of the process, neither MCAS Tustin nor MCAS El Toro had a separate organization to deal with base closure issues. The task was originally assigned to the Community Plans and Liaison Office, located at MCAS El Toro. The former head of that office recognized the need to establish a separate Base Realignment and Closure (BRAC) entity. He was successful in convincing base officials, and subsequently Marine Corps Headquarters (HQMC), that this requirement was valid.²⁵

The newly formed BRAC Office was tasked with being the single point of contact for the Command on all BRAC matters. They took over the job of coordinating BRAC issues with the City, HQMC, the Naval Facilities Engineering Command (NAVFAC) as well as with personnel planning the new facilities at 29 Palms and Camp Pendleton.

This was a new organization to the Marine Corps and to the DoN, with no precedent in this area. Previous DoN closures had been handled centrally by NAVFAC. At Navy installations scheduled to close, personnel are assigned to work on base closure issues as a collateral duty.²⁶

Since the activation of the BRAC Office at MCAS El Toro, officials have been working to establish more civilian

billets. These billets add an element of continuity to the office structure which is helpful to both the Marine Corps and the community. Personnel in these billets can build relationships and a sense of trust between the City and the Marine Corps that is not be transferred every few years. Since the opening of the El Toro BRAC office, the Navy has expressed an interest in establishing similar organizations at Naval bases scheduled to close.²⁷

The Navy

The Navy has an active role in the closure of MCAS Tustin for several reasons. First, primary responsibility for the Installation Restoration (IR) program rests with NAVFAC. This includes environmental restoration programs at all Navy and Marine Corps installations. The Environmental Division of the Southwest Division, NAVFAC (SWDIV) has a separate branch devoted to environmental problems related to closing bases. When MCAS Tustin was identified for closure, this branch took control of managing its environmental program. Funding for these programs is also administered through this office.²⁸

Second, NAVFAC has real estate disposal and property management expertise which handles all of the property disposal actions for closing Navy installations. This same capability is not resident in the Marine Corps. The Marine Corps had several options for managing the disposal of the property. Alternatives included handling the disposal themselves and contracting with an outside agency for property management services. The Marine Corps chose to contract with SWDIV for the disposal of MCAS Tustin. Their in-house expertise and the requirement to follow Navy property disposal procedures made SWDIV the logical choice.²⁹

The third reason for the Navy's active role in the MCAS Tustin closure is the establishment of a BRAC office within NAVFAC intended to be a central clearing house of information

for all DoN base closures and realignments. Regional BRAC offices were recently activated at the separate divisions of NAVFAC to deal exclusively with BRAC issues. These offices coordinate the closure process efforts at each of the affected bases. SWDIV established its BRAC office in April, 1993, after base closure issues in its region expanded to levels unmanageable on a part time basis. Since that time, the SWDIV BRAC office has been a participant in the closure process at MCAS Tustin.³⁰

THE PROCESS BEGINS

The MOU

As mentioned, the Marine Corps was operating on a tight schedule for closing MCAS Tustin and relocating to 29 Palms. This factor and the lengthy environmental cleanup process were driving forces behind the approach taken to facilitate reuse planning. Marine Corps officials understood that if reuse planning is completed early and zoning for the property is established, developers are more likely to be interested in the land-for-construction swap being proposed.³¹ Similarly, the City recognized the value of both having the reuse plan completed early and having a commitment from the Marine Corps on the level of environmental restoration to be completed at the base.³²

Therefore, the City and the Marine Corps agreed that it was in their best interest to work together in a cooperative arrangement which expedites the reuse planning process. Both parties signed a Memorandum of Understanding (MOU) formalizing this relationship. The primary thrusts of the MOU are: agreement to prepare a joint Environmental Impact Report/Environmental Impact Statement (EIR/EIS), commitment by the City to simultaneously prepare a Specific Plan for the

Reuse Area, and a good faith agreement by both parties to concur with the reuse alternatives.³³

This is the first time that a community and a military base have joined forces to prepare a single EIR/EIS and the Specific Plan for a closing base. Prior to this case, closing bases and affected communities each prepared their own EIR/EIS and then arbitrated the differences. Both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) have provisions which allow joint EIR/EIS preparation between federal and state or local agencies. However, in practice it is an option not often exercised.

Normally, the Marine Corps would have contracted with SWDIV to prepare the EIR/EIS. However, this type of arrangement is beneficial to all parties by "promoting intergovernmental coordination at the local and federal levels" and it "will optimize the value of the Reuse Area and assist the City in a timely economic adjustment to the Air Stations's closure."³⁴

In addition to establishing a team focus for reuse, the MOU highlights other important aspects of the agreement between the Marine Corps and the City. These include:

- Marine Corps assistance with the City's request for a grant from the OEA
- Marine Corps representation during consultant selection
- Designation of the City and the Marine Corps as joint lead agencies

Each of these factors will be discussed further in later sections.

Funding the Studies

Once the Task Force was established, its first order of business was to secure funding for the variety of studies

necessary to make informed decisions on base reuse. The City, with Marine Corps assistance, requested a \$750,000 grant from the OEA for this purpose. The request was denied.

The OEA did not believe there was significant economic impact to the community as a result of the base closure. The presence of other industry in the area and the lack of significant civilian employment aboard the base were two reasons cited for the decision.³⁵

Marine Corps officials at MCAS El Toro responded by providing \$750,000 of their operating budget to the OEA, who in turn passed it on to the City. Since the Marine Corps was interested in fast action on the part of the City, funding the project was in their best interest. If there had been no financial assistance, the City would have been forced to delay the studies and subsequent reuse decisions until other financing sources were identified.³⁶

Hiring the Consultant

The next step for the Task Force was to hire a consultant to prepare the studies and the specific plan. The City received seventeen responses to their proposal advertisement. The Marine Corps was involved in the screening and selection process for the consultant ensuring that each of the candidates qualified under federal standards. The final decision was made to hire the architectural engineering firm of Howard Needles Tammen & Bergendoff (HNTB) to manage the project.

HNTB was responsible to the City for the following:³⁷

- Overall project management
- Project organization
- Background Analysis
- Market/Demand Analysis
- Issue identification

- Reuse alternatives
- Community Facilities and Infrastructure Plan
- Fiscal Impact and Financial Analysis Report
- Specific Plan preparation
- Environmental Impact Report/Environmental Impact Statement on Specific Plan/Base Disposal and Reuse and Related Projects Plan
- Community participation

HNTB is the overall coordinator for the project and sub-contracts appropriate experts to produce various reports required by the scope of work. Their most significant role in the reuse planning process is to produce the EIR/EIS and the Specific Plan.

Joint Lead Agencies

Designating both the City and the Marine Corps as joint lead agencies is a first in the history of base closure organizations for the DoN or the Marine Corps. Normally the entity with jurisdiction over the base property is designated as the lead agency for reuse. This is typically the city or county that has previously annexed the base into their jurisdictional limits.

This arrangement is useful for several reasons. First, it gives the City sole control of the property's reuse once the Marine Corps leaves. Under these terms, a battle for jurisdiction over the property with the surrounding communities or the county is averted. At the beginning of the process, the City was the logical choice as lead agency since the portions of the base to be vacated were completely surrounded by the Tustin city limits. As discussed later, this situation changed in 1993.

Second, co-lead agency status enables the Marine Corps to keep the process moving in a timely manner. The Marine Corps' urgency for completion of reuse planning keeps pressure on the

City and the consultant to stay on schedule. The agreement reached in the MOU facilitates this. Had the City been the sole lead agency, this kind of pressure would not be possible.

The Vision Statement

Soon after HNTB was hired, the company presented a Vision Statement to the Task Force for review. The Vision Statement provides long term direction to the reuse planning process. It ensures certain core values, considered important to the community, predominate even as the details of the final plan change over time. The Vision Statement outlines nine guiding characteristics or qualities and was adopted by the Task Force for use in the reuse planning.

The Vision Statement included the following goals for the final reuse plan:³⁸

- Good Neighbor: New uses have minimal adverse impact to surrounding area
- Coherent Setting: Development pattern uses creative landscaping and architecture to create connectivity between buildings and uses
- Self-Sufficient: Mixed use promotes the "live where you work" concept
- Fiscally Sound: Tax revenues offset the cost of public services to the area
- Distinct Design: Design does not compete with Old Town Tustin
- Valued Heritage: History of the base is preserved
- Forward Looking: Uses are attractive to 21st Century businesses
- Balanced Local and Regional Responsiveness: Uses benefit the needs of the community and are balanced with needed development
- Sustainable Environment: Maintain clean environment and reintroduce native plants and animals

Public Opinion

From the beginning of the planning effort, community leaders wanted to incorporate public input into the reuse process. To accomplish this, 26,000 public opinion questionnaires were distributed throughout the community and the base. Residents were asked to indicate their level of concern about potential issues associated with base reuse and their level of support for various uses of the property. The survey also asked for opinions about the two blimp hangars aboard the base.³⁹

Results of the survey indicated that the most important issue for the public is cleanup of hazardous waste on the base. Other issues of concern included maintaining the character and identity of Tustin, adequate roadways, creating a positive financial impact on the community, and reducing the noise impact on local residents.⁴⁰

The survey results also included a summary of land uses most and least supported by local residents. Interestingly, none of the top five land uses supported by the community are revenue producing uses. They include parks and recreational areas, open space, educational facilities and senior citizen housing.⁴¹ These types of areas are necessary for a balanced community but provide little if any revenue to the City to offset the infrastructure required to support them. This creates a conflict between the public concern for positive financial impact and the desired uses.

In addition to the land uses mentioned, the survey indicated public support for keeping at least one of the blimp hangars. Again this support contradicts the desire for fiscally sound reuse. The blimp hangars are expensive to maintain and would cause a drain on the City's revenue base unless other revenue generating activities are incorporated into the area. Further discussion on the blimp hangars is provided later in this chapter.

FACTORS INFLUENCING THE REUSE PLAN

With the initial framework established for managing the MCAS Tustin project, the following months were spent by the consultant and their sub-contractors working on the various reports and studies required by the scope of work. Primary emphasis was given to preparation of the EIR/EIS, the market analysis, and to proposed reuse alternatives.

Simultaneously, Marine Corps officials were working on plans to move the operational units from Tustin to 29 Palms. In addition, the Environmental Division, SWDIV, began conducting preliminary studies of MCAS Tustin to determine the baseline environmental status.

Each of these parts of the project are related and are influenced by many different factors. This section examines the important factors affecting the initial reuse decisions.

Environmental Considerations

After fifty years of use as a military air base, MCAS Tustin has its share of environmental contamination. Prior to the recent surge of environmental regulations, military and civilian industries were not particularly careful about disposing of hazardous substances. As public knowledge about the dangers of contamination increased, so did regulations concerning the cleanup of the contaminated areas. Title 10 U.S.C. 160, for example, directs the SecDef to conduct an environmental restoration program at all defense facilities in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).⁴²

These directive applies equally to bases that are closing. In fact, because of heightened interest in the environmental conditions at closing bases, the Base Closure Act specifically directs the SecDef to:

ensure that the environmental restoration of any property made excess to the needs of the Department of Defense as

a result of such closure or realignment be carried out as soon as possible with funds available for such purpose.⁴³

Extent of Contamination

As noted, the Environmental Division, SWDIV, began preliminary studies to determine the extent of the contamination aboard MCAS Tustin. Normally the study process begins with a preliminary assessment and site inspection to identify potential sites of contamination and assess the risk associated with each kind of contaminant found. Next, a detailed remedial investigation is conducted. This includes sampling the soils and water at contaminated sites to determine the extent and exact location of the contamination. Finally, once the studies and reports are complete, remedial action is performed. This is based largely on the risk associated with the contaminant and the intended use of the property.⁴⁴

At MCAS Tustin, the preliminary assessment and site inspection indicated primarily petroleum based substances in the soil. Few solvents were discovered, lessening the problem from both a cleanup and funding perspective. The highest concentration of contaminants is in the center area of the base while the parcels along the boundaries are relatively clean.⁴⁵

In general, petroleum products are easier to clean than solvents. There are many methods to combat this type of substance such as the use of petroleum eating organic microbes. In addition, petroleum based contamination is much less expensive to clean than solvents. The estimated cost to clean MCAS Tustin is approximately \$75 million. This is relatively small compared to the \$250 million estimated to clean MCAS El Toro.⁴⁶

When considering the possible uses for the property, the City must take into account the type and extent of

contamination. Areas with little or no contamination can be transferred faster and cleaned to a higher standard than those areas with solvents present or with deep ground water contamination. The latter may take ten to fifteen years to clean. In addition, areas with significant concentrations of carcinogens or other highly toxic substances will be difficult to clean to standards high enough for residential or park uses. Therefore, the City should not plan these areas as the most important parcels in the development.

According to City officials and the consultant, their planning efforts take into account the levels of contamination identified so far. The City's intention is to zone the most toxic areas for some future use anticipating that they are likely to be transferred last.⁴⁷

Cleanup Standards

The question of "how clean is clean?" is an often debated issue by everyone involved in environmental issues. The argument begins when trying to decide how much remediation is required to clean a particular parcel of land. Ultimately, the environmental regulators such as the Environmental Protection Agency (EPA) or the California Department of Toxic Substance Control (DTSC) determine the level of cleanup required for each site.⁴⁸ However, the basis for their decision can be negotiated and will be different for each location.

For bases not facing closure, the cleanup level decision is easy. The base will continue to be used as a military installation and cleanup is done to satisfy current use standards. Those areas currently used for residential will be cleaned to residential standards. With light industrial or commercial sites, the risk of exposure to contamination is reduced. Therefore, the cleanup standards are not as stringent.

For closing bases, the issue of cleanup standards is more complicated for several reasons. First, the Congress passed an amendment to CERCLA, the Community Environmental Response Facilitation Act (CERFA), which states that on property being transferred from federal ownership, "...the United States Government should remain responsible for conducting any remedial action...."⁴⁹ This is contrary to previous practices of selling or transferring federal property "as is".⁵⁰

Second, it is not clear whether the government should clean the property to current use standards, planned reuse standards, or restore the property to its original condition. CERFA does not specify the type or level of remedial action required. Cleaning to existing use standards when that use will change at some finite point in the future may not be the best solution. On the other hand, cleaning to support planned reuse of the property may not be realistic from a financial perspective if the site is particularly contaminated. Cleaning to original condition or background standards is likely to be infeasible or impossible after decades of introducing contaminants into the environment.

Initial Policy at MCAS Tustin

From the City's perspective, the cleanup standards to be used at MCAS Tustin were clear. At the beginning of the reuse planning process the Marine Corps agreed to let the final reuse plan drive the cleanup effort. If the reuse plan was not final prior to making decisions on remediation, reasonable assumptions would be made regarding the probable reuse scenario and cleanup would proceed.⁵¹

For the City, this policy was exactly what they wanted, however they were realistic in their expectations. Knowing it was not feasible to plan for residential areas on sites with high concentrations of contaminants, they agreed to take into

account existing conditions of the property as well as the cost and time involved in remediation when formulating their plan.⁵²

SWDIV originally agreed that the reuse plan would be a significant factor when planning environmental restoration at MCAS Tustin with one slight deviation. When conducting the preliminary assessment and site inspection, SWDIV personnel use the residential reuse scenario as the baseline for the studies. If there is strong evidence that the property would never be used for residential, the risk level is changed to reflect less stringent criteria. Once the studies are complete, the intended use of the property is examined to determine the amount of actual restoration required.⁵³ As discussed in a later section, this policy changed twice over a period of two months.

CERFA Parcels

CERFA makes another significant change to CERCLA. It requires federal agencies, planning transfer of property, to separately identify those parcels which are already considered clean. This allows the agencies to proceed with transfer of these sites prior to finishing cleanup of other contaminated parcels. In other words, the entire base need not be clean prior to transfer of areas certified as clean.⁵⁴

At MCAS Tustin, SWDIV has begun the process of identifying the clean sites.⁵⁵ Once identified, the City can plan early development of these areas which are likely to be transferred as soon as operations aboard the base cease. The reuse plan is much more meaningful if property release timing can be anticipated. Having this knowledge early in the planning process helps generate interest from potential developers.

Federal Screening Process

Prior to transferring former military bases to local developers, DoD officials must first offer the property to other agencies within the DoD, other federal agencies, advocates for the homeless coordinated by the Department of Housing and Urban Development (HUD), and to state and local agencies. If these agencies have legitimate uses for the property, the DoD can convey the land and facilities to them at no cost. The City must take these potential uses of the property into consideration when planning their development.

Department of Defense Screening

The DoD screening was conducted shortly after MCAS Tustin was put on the list of closures in 1991. There was very little interest from other DoD agencies. Initially, both the U. S. Coast Guard and the U. S. Air Force had interest in small portions of the property, however no further inquiries have been received.⁵⁶

Federal Agency Screening

In October 1992, SWDIV began the federal agency screening. The response was limited to a few agencies interested in supporting the City with their reuse plans but without specific mission requirements of their own. The National Parks Service indicated their willingness to assist the City in obtaining lands for use as parks and recreational areas. The Fish and Wildlife Service expressed their desire to determine the affect of the base closure on any endangered species in the area. Their response listed only one such species, the peregrine falcon. The Federal Highway Administration is prepared to support the City with transportation and roadway improvements. Finally, the U. S. Department of Education identified numerous potential

educational uses for the property and offered assistance to the City with public benefit transfers for those uses.⁵⁷

The one federal agency identifying hard requirements for portions of the base was the Federal Bureau of Prisons. This agency was originally interested in 250 to 1000 acres of land as well as some of the facilities such as barracks and dining halls. In addition, the agency was willing to release the DoD from any environmental cleanup responsibility and conduct restoration of the property themselves.⁵⁸

From the DoD perspective, this proposal was very promising. Not only did the Marine Corps have the opportunity to dispose of a major portion of the base quickly, but they would avoid using their own funds to conduct the cleanup effort.

Local leaders did not see this proposal as an opportunity but as a problem. The City did not want a jail or a prison facility in the middle of their community. Therefore, the Task Force passed a motion to formally oppose building a correctional facility on the property. The Tustin City Council also adopted a similar resolution. After considering the impacts on the community and the political struggle which was likely to occur on this issue, the Federal Bureau of Prisons withdrew its request for the property.⁵⁹

McKinney Act Screening

On July 22, 1987, the Congress passed Public Law 100-77, the Stewart B. McKinney Homeless Assistance Act (McKinney Act). The intent of this legislation is:

To provide urgently needed assistance to protect and improve the lives and safety of the homeless, with special emphasis on elderly persons, handicapped persons, and families with children.⁶⁰

As a result of this law, federal agencies, including DoD, are required to identify unused or underused property and facilities for possible use by the homeless.

The problem with this screening requirement is its timing. The statute requires officials to solicit requirements from homeless support agencies no earlier than eighteen months prior to closing the base. Following the solicitation, there is a sixty day deadline for agencies to indicate interest in the property and a ninety day deadline after that to file the application. As soon as an agency asks for an application, other plans for use of the property are put on hold until a determination on the request can be made.⁶¹

For MCAS Tustin, both early identification of reuse alternatives and zoning were key to attracting developer interest in the land-for-construction swap proposed by the Marine Corps. The Task Force recognized the potential for the McKinney Act requirements to impede their ability to accomplish this task.

The City took a proactive approach to this problem. Instead of waiting for SWDIV to contact HUD and other agencies who might have an interest in MCAS Tustin, they contacted these agencies themselves and incorporated their needs into the reuse plan.

The City sent notices to every approved agency on HUD's mailing list soliciting interest in the property. Nine responses were received out of ninety solicitations mailed. Of these nine, five were taken on a tour of the base facilities. In addition, there was some interest in base facilities from several groups not on the HUD list who read about the reuse planning effort. They were also invited to attend the tour.⁶²

By incorporating the needs of the homeless into the reuse plan in advance, the City can avoid the potential problem of adopting an unrealistic plan, requiring extensive rework later in the process. Though efforts by the City are non-binding to the homeless organizations, the responses received give the Task Force an idea which facilities at MCAS Tustin are likely

to be requested when HUD conducts the official screening. These areas can be incorporated into the overall reuse plan now and cause little or no disruption at the end of the process.

State and Local Screening

Although the state and local screening has not yet been conducted, the City has been contacted by various organizations interested in the property. The most significant of these inquiries has been from the Orange County Fire Department (OCFD) and the Directors of the California Exposition and State Fair (CESF). The OCFD is interested in building a fire station and a fire academy on the base. The fire academy is also supported by the Department of Education. The CESF Directors are considering moving the Orange County Fairgrounds to the site.⁶³

The state and local screening is conducted after the federal level screening. It also incorporates screening of any local indian tribes which may have an interest in the property.

Financial Impacts

When considering the reuse of MCAS Tustin, the City must consider the financial implications of decisions they make. Not only implications to the community, but the impact their decisions have on the financial resources of the Marine Corps and the federal government as well.

City Funds

At this point, the City has no plans to purchase any property from the Marine Corps. Due to lack of funds, they are interested in only those parcels which can be conveyed for public benefit.⁶⁴ Current GSA regulations allow conveyance of base property to local communities at no cost or low cost for educational uses, parks and recreational uses, roadways

and public transportation uses, and for other uses beneficial to the general public. This method of acquiring property does not affected the City's funding levels.

However, the City's tax base is affected. The land use and zoning decisions made in the Specific Plan are intended to stimulate economic growth in the region. These decisions impact the financial health of the City and both business and private property owners. By zoning commercial or industrial areas, the City increases sales tax as well as property tax revenue collected. Zoning residential areas increases property taxes and generates a need for retail areas and for parks. Parks generate no new revenues but can attract residents and businesses to the area.⁶⁵

Proper zoning can increase the City's tax base without detracting from current land values. The City's desire to have a balanced approach to reuse is consistent with the necessity to pay attention to the financial implications of reuse decisions.

President Clinton's proposal to convey the base properties for a wider variety of uses also has financial implications for the City. These will be discussed in a later section.

Marine Corps O&M Funding

The reuse decisions can also have a marked impact on Marine Corps Operations And Maintenance (O&M) funds. O&M funds, which support the daily operations of the Marine Corps, are also used to fund the cleanup of contaminated sites aboard bases scheduled to close. Decisions on reuse affect the amount of funding required to clean the bases.

Care must be taken by the City not to be unreasonable when choosing reuse options. If a particularly contaminated site is zoned residential, it may take more money to clean the area than the Marine Corps is willing to commit. If reuse and zoning decisions are contested by the Marine Corps, the

process can slow down considerably. This is not in anyone's best interest.

Overall funding for the Marine Corps is also at issue here. With the downsizing of the DoD, funding levels for all the services are experiencing reductions. As the O&M account shrinks, there will be fewer dollars to spend on closing and cleaning bases. As a consequence, the Marine Corps will be forced to clean contaminated sites at a slower rate, thus, the transfer of property is delayed. These delays result in higher overhead for the Marine Corps, who must maintain the base while cleanup is conducted. Slower development of the area also affects the community, which loses potential tax revenues. Again, careful consideration to the extent of contamination and the cost of remediation is required.

Historic Landmarks

The military has a rich history in the Tustin area. Part of that history has become a prominent sight on the Tustin skyline. Two of the original blimp hangars built by the Navy during World War II are still in use by the Marine Corps today. These hangars, which now accommodate helicopter squadrons, span approximately seven acres of interior space apiece. These enormous structures can be seen from miles away and have become a familiar part of the Tustin landscape.

The blimp hangars are of particular interest to the Reuse Planning Task Force for several reasons. First, each is listed on the National Register of Historic Places. They are considered to be the largest unsupported wooden structures in the world.⁶⁶ This gives them special historic significance and careful thought must be given to actions which would destroy these irreplaceable landmarks.

Second, the annual cost of maintaining each hangar is approximately \$500,000.⁶⁷ Preserving the hangars will create a drain on the City's resources unless uses can be developed

for them which generate enough revenue to support their upkeep.

Third, the results of the public opinion survey conducted by the Task Force indicate that sixty eight percent of those surveyed are in favor of saving at least one of the hangars.⁶⁸ The reuse Task Force previously expressed its commitment to include public input in their planning effort. Therefore, they must try to find a solution which satisfies both the desires of the community and the requirement to develop a fiscally sound reuse plan. City officials have been contacted by several firms with reuse ideas for the hangars, however none have the economic backing to follow through with their proposals.⁶⁹

Finally, the immense size of the hangars presents special problems to reuse planners. The disposition of the hangars, which are located in the center of the base, will shape the use of the surrounding area. Buildings placed next to or in the vicinity of the structures are going to appear dwarfed, diminishing their aesthetic value. If parks are constructed around one or both hangars, enough space must be planned to give it a balanced appearance.

Market Demand

A key factor to consider when planning the reuse of any military base is the market demand for its various potential uses. The Task Force must focus on projected changes in demographics, forecasted trends in demand for housing and business space, and other uncertainties in the region which influence reuse planning.

HNTB sub-contracted the job of forecasting market demand to Economics Research Associates (ERA) of Los Angeles, California. In April 1993, ERA produced a draft market demand analysis which was staffed to both the community and military officials for review. Comments and recommendations were

returned to ERA and a final version of the study is being prepared at this time.

Unfortunately, the results of the draft analysis are not very promising. The study indicates relatively low demand for residential and commercial property over the next two decades. ERA predicts only moderate demand for industrial and research and development (R&D) space and virtually no demand for retail space or new visitor accommodations.⁷⁰

Factors contributing to weak demand in the area include:⁷¹

- Slow population growth projections
- Increased number of persons per household
- Slowing of economic development
- Overbuilt office space with increased office vacancy rate
- Uncertainties in the California economy
- Poor images of the California business conditions
- High cost of redeveloping dense aircraft runways

When the closure of MCAS Tustin was first announced there was tremendous real estate developer interest in the property. This interest tapered off when the interested parties were made aware of the time frame involved in closure and that the property was to be sold, not conveyed for public benefit.⁷²

In spite of the low market demand, the reuse planners can create interest in the property with innovative reuse designs which attract both business and residents. Proper timing of the sale or release of parcels helps avoid flooding an already saturated market with property it can not absorb. It is clear from the results of the demand analysis that the community must be patient and not expect immediate results.

ALTERNATIVE REUSE PLANS

As the planning process progressed, HNTB presented the Task Force with three draft alternatives for the master reuse plan. These alternatives were concept oriented and contained few specifics about each parcel of the property. The proposals were intended to generate broad term discussion about the types of development desired for the base.⁷³

The three alternatives covered a wide range of possible uses for the base. One plan was sensitive to regional needs and the low market demand. It included a waterfront area designed to integrate business, residential, and recreational areas. This layout had a unique circular road system designed to enhance the surrounding architecture. The waterfront area incorporates the "live where you work" concept of a planned community and combines many different types of uses in the same area.⁷⁴

The second plan presented was oriented toward maximizing revenues for the community. As much high and low density residential property, industrial areas, R&D space and commercial office space were included as could reasonably be accommodated. Very little park and recreation areas were set aside. The road system was more functional increasing access to the base without the aesthetically pleasing designs.

The third design was a compromise between the first two extremes incorporating features of each. The City liked this balanced plan, however wanted to use the less artistic road system of the second plan.⁷⁵

After studying the alternatives, the Task Force provided HNTB with comments and recommendations. Revised recommendations are currently being drafted. When presented, the revised plans will offer different ideas for land use but each will contain the same basic street and road design.

CHANGES IN THE SITUATION

While conducting this research, three events occurred which had a significant impact on the reuse planning process at MCAS Tustin. First, the 1993 BRAC Commission recommended MCAS El Toro for closure in 1999. Second, SWDIV announced a major change in their environmental cleanup policy significantly reducing the amount of restoration planned at MCAS Tustin. Finally, President Clinton announced a new program designed to speed up the economic recovery of communities affected by base closures. This section discusses each of these events and their effects.

BRAC-93

In their 1993 recommendations to Congress and the President, the BRAC Commission identified MCAS El Toro for closure. The Commission's recommendation canceled the planned air facility construction at 29 Palms and directed relocation of Marine Corps units at both MCAS Tustin and MCAS El Toro to other locations including the Naval Air Station (NAS) Miramar, California and the Marine Corps Air Facility (MCAF) Camp Pendleton, California. Congress subsequently approved the recommendations and the President signed them into law.⁷⁶ This event has several significant impacts on reuse planning at MCAS Tustin.

Areas of Retained Housing

The new closure decision included areas of MCAS Tustin that were to be retained by MCAS El Toro. This adds approximately 300 acres to the total amount of property being considered for reuse at MCAS Tustin. The family housing units on those sites will now become available to the community. The addition of existing residential property into the reuse plan shapes the use of those areas and adjacent parcels.

Introducing existing military housing into the civilian residential market has its own set of problems. As previously mentioned, the demand for housing is considered low. Placing these units into the current market too quickly can have detrimental economic effects on residential property values in the surrounding area. Thus, timing of their release to the civilian market is critical. The potential economic effects of this problem are discussed further in the next chapter.

Jurisdiction

Jurisdictional lines are not as clear with the addition of the extra acreage. Approximately 70 acres of MCAS Tustin are within the city limits of Irvine, California. Prior to the Commission's recommendations, the surrounding communities had only a passing interest in the reuse planning, because the entire area under consideration fell within the Tustin city limits. They believed that anything the City planned for the area would be better than the current situation.⁷⁷

Now, with part of the reuse area in the jurisdiction of another municipality, there is potential for delay in completion of the Specific Plan. The City of Tustin is planning to include the 70 acres in their reuse plan but leave its zoning to Irvine. So far, the City of Irvine has been cooperative and is satisfied with the planning effort. Their intention is to maintain residential use zoning for that parcel, although no formal agreement to that effect has been drafted.⁷⁸

The jurisdiction problem also has implications to the organizational structure of the Reuse Planning Task Force. The City of Tustin has attempted to solidify their position as lead agency in reuse planning, fearing a loss of control and increased influence by the City of Irvine. Tustin officials sent a letter to the Marine Corps requesting confirmation of their status as lead planning agency. Marine Corps officials

declined to become involved in this sensitive political negotiation.⁷⁹

MCAS El Toro Reuse

The third problem created by the closure of MCAS El Toro is the potential implications of its reuse. Prior to the El Toro announcement, the Task Force was wrestling with the introduction of 1200 acres of mixed use property into an already depressed market. The closure of MCAS El Toro not only adds 300 acres to the Tustin reuse plan but also creates a need to plan the reuse of an additional 4000 to 5000 acres of property in the same vicinity.

There is considerable effort underway in several communities of Orange County to convert MCAS El Toro into a commercial airport.⁸⁰ If this becomes a reality, the closure of MCAS El Toro will have a positive effect on the reuse of MCAS Tustin. A commercial airport attracts new business into communities and Tustin's close proximity to El Toro creates potential for spillover demand.

On the other hand, not all residents of Orange County want a new airport. Specifically, the communities immediately surrounding MCAS El Toro are working to block the airport initiative.⁸¹ If MCAS El Toro is not converted into an airport, its reuse options are similar to those of MCAS Tustin. The property at both bases would be in direct competition for the same slow market.

This issue is not likely to be resolved in the near future. Unlike MCAS Tustin, MCAS El Toro does not have clear jurisdictional lines. Several different groups are vying for lead agency status. There is potential for lawsuits over control of reuse planning and over decisions made about the airport proposal. The outcome will have an effect on the reuse effort in Tustin.

BRAC-91 or BRAC-93

The legislation authorizing the BRAC-93 closures includes language directing major changes to the MCAS Tustin closure plan. BRAC officials must decide whether MCAS Tustin will close by 1997, as previously required, or in 1999 along with the other BRAC-93 closures. A decision on this issue will have an effect on reuse planning at MCAS Tustin.

There are several possible outcomes to this situation:

- Base parcels identified for closure in 1997 stay on schedule while the remaining 300 acres close along with MCAS El Toro in 1999
- Both bases close in 1999
- All 1500 acres of MCAS Tustin close in 1997 and MCAS El Toro closes in 1999

Dividing the closure of MCAS Tustin into two separate events complicates the job of the Task Force. Reuse planning for the extra 300 acres could be included in the overall reuse plan, with execution spread over a longer period of time. However, with the jurisdictional issues not yet completely settled, there is potential for reuse planning to get bogged down by other community interests.

A case could be made for including the 300 acres in the MCAS El Toro reuse plan. The BRAC-91 decision essentially set aside the area as an annex of MCAS El Toro. Therefore, whichever organization takes control of the El Toro reuse effort could argue that they have jurisdiction over reuse planning for the annex as well. Tustin officials would be forced to participate in this separate organization without the same autonomy they enjoy in their current situation.

Closing both bases in 1999 is the best solution for the Marine Corps but causes problems for the City. The changes to the relocation plan included in the BRAC-93 decision were made two years after it was originally directed in 1991. With only four years remaining in the six year time schedule for

closure, the Marine Corps may not have sufficient time to prepare new facilities at both NAS Miramar and MCAF Camp Pendleton. Closing the base in 1999 along with MCAS El Toro gives the Marine Corps time to carefully reevaluate its plan and make an orderly transition to new facilities.

For the City, closing both bases in 1999 creates a few problems. First, delays in transferring the property may cause businesses and developers to look to other areas for new projects. Developers counting on release of the property in 1997 may be put off by an additional two year delay.

Second, a delay in the closure date may invalidate the studies conducted in support of their current reuse planning effort. If this occurs, the City must revalidate the studies and possibly reevaluate their final reuse plan. An additional drain on the City's financial resources will result.

Third, any delays executing the reuse plan create potential for challenges from outside parties. Although jurisdiction seems clear in the Tustin case, delays to the process give opponents of the final plan time to argue further against its implementation.

The best solution for the City is to close the entire base in 1997. Since the Specific Plan is not final, modifying it to include the extra 300 acres is easily accomplished. With this alternative, studies conducted in support of the plan remain valid and additional resources required are minimal.

According to BRAC officials at MCAS El Toro, a recent decision was made extending the closure deadline for all portions of MCAS Tustin to 1999. However, it is the Command's intention to discontinue operations at the site by 1997 and transfer the property as rapidly as possible.⁸² This decision gives the Marine Corps flexibility to adjust its relocation plans as necessary and the City can make tentative arrangements for development in 1997 as previously planned.

Changing Marine Corps Interest

Marine Corps participation in reuse planning was driven by concern over potential development adjacent to military housing areas and attracting developers interested in the land-for-construction swap. As a result of BRAC-93, the Marine Corps no longer has a military interest in the property. Closure of MCAS El Toro eliminates the need to keep Tustin housing areas and therefore erases any interest in adjacent development. The language of the BRAC-93 decision canceled the 29 Palms construction project suspending further progress on the land swap.

Marine Corps officials have made it clear to the City that they are not ending their involvement in the reuse planning effort. They are committed to working closely with the City on reuse issues in spite of the change.⁸³

Continued involvement in reuse planning is good policy for several reasons. First, the BRAC office will assume caretaker responsibilities for the base once operational units have relocated. Positive relations with the City will be an important element for success of this mission. In addition, the City will require updated information on MCAS Tustin's environmental status to effectively plan its reuse. The BRAC office will be an significant link to that information. Finally, the Marine Corps has invested a great deal of effort sharpening its public image over the years. Discontinuing support to a community which has supported the Marine Corps for over forty-two years would tarnish that carefully polished image.

Environmental Policy Change

During the initial stages of reuse planning, the City had the impression that the reuse plan would drive the environmental restoration effort. This position was acknowledged by both the Environmental Division, MCAS El

Toro⁸⁴ and SWDIV⁸⁵ and is implied in the MOU signed by the Marine Corps and the City. At a scheduled reuse planning meeting in August 1993, SWDIV representatives announced a change to their policy on environmental restoration. They explained that environmental studies are conducted using residential cleanup values but actual restoration will only meet existing land use standards. SWDIV representatives went on to suggest that there was some room for negotiations regarding actual levels of restoration.⁸⁶

The policy outlined at the meeting is based on SWDIV's interpretation of CERCLA and cleanup standards called Applicable or Relevant and Appropriate Requirements (ARARs). SWDIV contends that they will comply with federal and state ARARs which require cleanup to current use levels.⁸⁷ However, the standards do not consider that military uses of the property will cease prior to conducting actual cleanup.

The announcement has significant impact on reuse planning at MCAS Tustin. Because the base is currently a military helicopter facility, the land is primarily used for light industrial or commercial purposes. The City's final version of the reuse plan will not include as much industrial or commercial area. Judging from the market demand study and the City's vision statement, the property will have a variety of uses predominantly residential.

If the military will not allow reuse planning to dictate the level of restoration, the property becomes less attractive to developers who must bear the extra expense of cleanup. The City may be required to revise their final plan aligning reuse with anticipated restoration.

However, if land price reflects the level of restoration performed, incentives for potential buyers are reestablished. If private developers can clean the property at a lower cost than the military, reducing the price of the land would increase its demand. From a military budget perspective, this

option minimizes the drain on O&M funding created by environmental restoration. As is discussed in the next section, this policy decision was short lived.

Community Reinvestment Program

As this chapter has illustrated, closing military bases is a slow and cumbersome process. The cleanup alone can take decades to accomplish. In addition, the economic needs of surrounding communities are often not fully considered when making decisions affecting the closure. On July 2, 1993, President Clinton announced a new five point program to address this issue. The Community Reinvestment Program is designed to reduce bureaucratic red tape and speed the cleanup process so that economic recovery and reuse of the base occurs swiftly.

The program has a single goal: "Rapid Redevelopment and Creation of New Jobs in Base Closure Communities," and its five points include:⁸⁸

- Jobs-Centered Property Disposal
- Fast-Track Cleanup
- Designated Transition Coordinators
- Easy Access to Transition and Redevelopment Help
- Larger Economic Development Planning Grants

Reuse planning at MCAS Tustin has been most affected by the first two parts of this program. They are discussed in more detail below. However, the base has only a few civilian employees. Therefore, little transition assistance for these workers is required. In addition, the Marine Corps funded the studies for the City after the OEA denied their request for an economic development planning grant.

Jobs-Centered Property Disposal

Current laws on property disposal allow the DoD to convey former military bases at no cost or at a discount to communities or other agencies planning to use the property for various public uses including: public health, education, airports and transportation, parks and recreation, wildlife conservation, and historic preservation.⁸⁹ The new program proposes to include job creation in this list of eligible uses. Under this program, the DoD can convey excess property as long as it creates an economic benefit to the community.⁹⁰

Although the definition of and criteria for creating economic benefit have not yet been developed, several methods for streamlining the property disposal process have been outlined. First is the use of interim leases which allow smaller communities to have access base property faster without large outflows of capital. Second, is the delegation of approval authority down to the lowest possible level. In some cases this may include the local base commander.⁹¹

The third streamlining method outlined is to speed the federal screening process. This involves early inclusion of local community reuse planners and timely identification of requirements from homeless assistance providers. The Reuse Planning Task Force at MCAS Tustin has already accomplished this task. Although their screening was not the official McKinney Act screening, they were able to identify probable areas suitable for use by the homeless assistance groups.

The last element in the jobs-centered property disposal plan is also the most controversial for the Marine Corps. The plan makes it possible to transfer personal property along with real property in an effort to entice businesses to the area. This means that furniture, computers, fire equipment, etc., could potentially transfer to the new owners along with the buildings and the land. The Marine Corps does not consider this to be a feasible alternative. Unlike

organizations such as the 7th Army Infantry Division at Fort Ord, California, the operational units stationed at both MCAS Tustin and at MCAS El Toro are not being disestablished. Instead, they are relocating to other bases and will continue to have the same personal property requirements.

If the Marine Corps must transfer all or some of its personal property, replacement equipment will be required. This extra expense further drains the O&M funding accounts which are already straining to pay for environmental restoration. This issue is currently being discussed by Marine Corps officials but has yet to be resolved.⁹²

Conveying base property increases the City's responsibility in the base closure process. Instead of acting as a facilitator between the federal government and potential developers, City officials may find themselves in a property management role once the base is transferred. The staff and facilities necessary to manage the base property will put additional burdens on the City's revenue base.

Fast-Track Cleanup

Noting the extraordinary amount of time required for environmental restoration at military bases, the President's Fast-Track Cleanup plan outlines ways to accelerate the process. Elements of the plan include establishing a Cleanup Team at each base on the National Priorities List (NPL), improving the process of identifying clean parcels, consolidating NEPA requirements, and rescinding overly restrictive legislation.⁹³

The Fast-Track Cleanup has an immediate effect on the reuse planning at MCAS Tustin. The new plan reverses the SWDIV change in environmental cleanup policy announced in August. The Community Reinvestment Program Goal clearly states that the program is "based on locally developed reuse plans."⁹⁴ This change eliminates the uncertainty about

restoration levels caused by SWDIV enabling the City to continue its planning without further delay.

The community leaders of Tustin realize, however, that funding for restoration is limited, and they would like to see the land transferred as quickly as possible. Therefore, BRAC and City officials have coordinated closely on this issue to find the closest fit of reuse alternatives to budgetary constraints.⁹⁵

The President's proposal to consolidate the NEPA requirements is exactly what the Marine Corps and the City of Tustin have joined forces to accomplish. Instead of preparing two separate EIR/EIS's, the program recommends that a single document be prepared using the community's reuse plan as the basis for the study. This reduces the time required for documentation by up to fifty percent.⁹⁶

The Fast-Track Cleanup Program also addresses future liability for restoration. The 1993 Defense Appropriations Act holds the DoD responsible for all environmental cleanup on closing military bases including damage caused by future tenants.⁹⁷ CERFA further complicates the issue by requiring that the deeds to transferred properties include,

a covenant warranting that any response action or corrective action found to be necessary after the date of such sale or transfer shall be conducted by the United States.⁹⁸ (emphasis added)

Even with all parties in agreement on what cleanup standards should be at the time of transfer, this legislation could potentially hold the government responsible to clean former military bases forever. As a result, the DoD has been slow to allow tenant businesses onto property that is not yet sold.⁹⁹

On July 2, 1993, the President signed the 1993 Supplemental Appropriation Act to rescind the language regarding future liability. The new legislation ensures that

the DoD is only responsible for contamination it caused.¹⁰⁰ For MCAS Tustin, this may open up certain parcels of the base to tenants earlier than planned. Specifically, those areas of the base that have some contamination can be leased to tenants while the restoration is ongoing. This allows the City to begin its economic recovery without having to wait until the base is completely clean.

ECONOMIC IMPACTS OF PROPERTY DISPOSAL

President Clinton's Community Reinvestment Program is a major step in speeding the process of closing military bases. Its Jobs-Centered Property Disposal Plan puts job creation and economic benefit on the list of purposes for which the DoD can convey excess property. The intent of the plan is to stimulate economic growth in those areas affected by closure of a military base. However, economic growth in the local community may come with a price to overall social welfare.

This chapter reports the results of an analysis examining potential economic effects of several possible outcomes of the reuse planning process. First, general impacts of increasing supply on prices and social welfare are discussed. Second, illustrative examples of optimal land use are presented that maximize both net social welfare and net federal revenue. Finally, the effects of a zero cost land grant to the City of Tustin are examined. This is not an exhaustive list of possibilities nor does it purport to accurately represent the current situation in Tustin. It does, however, illustrate how problems of this nature can be solved mathematically. Detailed analysis is contained in Appendix A.

GENERAL EFFECTS OF INCREASING SUPPLY

Before examining the specific effects of the MCAS Tustin scenario, it is helpful to review the impact a shift in supply has on both price and social welfare. Figure 1 illustrates both points simply. As new supply is added to the existing market, the supply curve shifts to the right. As a result, the equilibrium point moves along the demand curve from point A to point B, increasing the quantity demanded and decreasing the equilibrium price.

In addition, a shift in supply has an effect on both the amount and distribution of total surplus. Total surplus is shown as the area to the left of both the supply curve and the demand curve. It is a graphical representation of total benefit to social welfare from a competitive market.

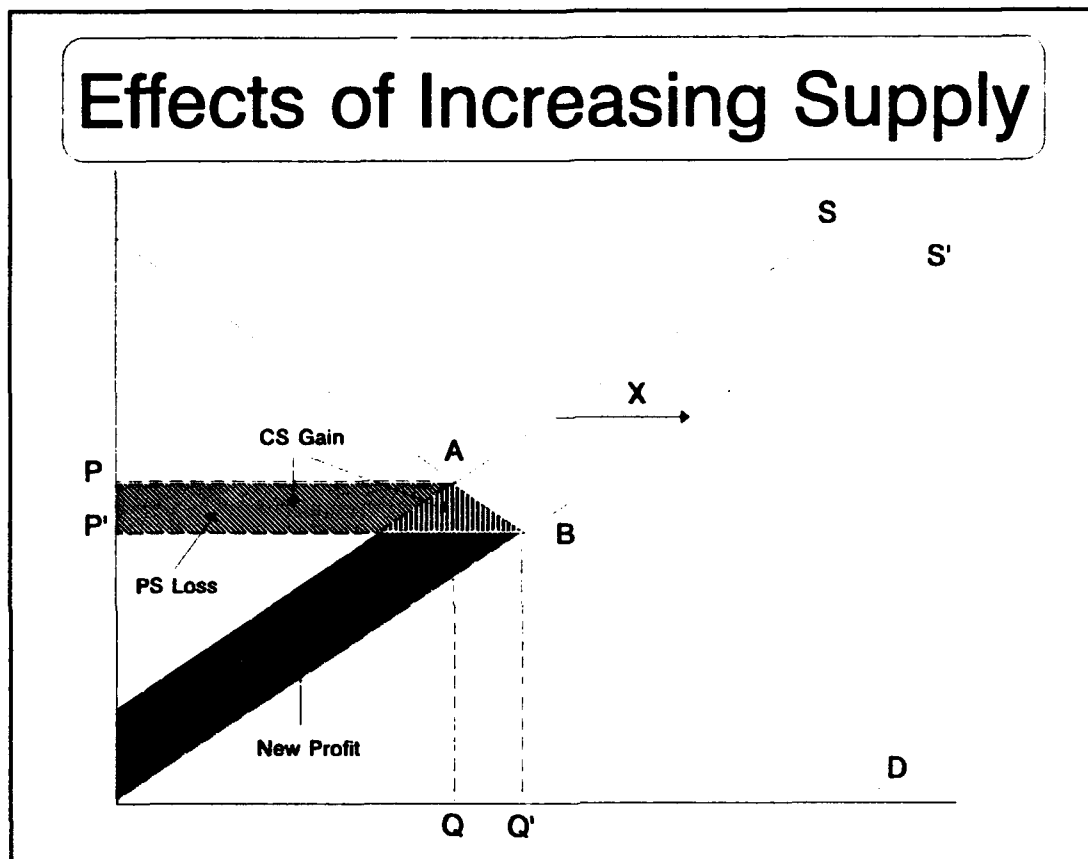


Figure 1

Total surplus is comprised of consumer surplus and producer surplus. The area on the graph to the left of the demand curve and above the equilibrium price represents consumer surplus. It is the difference between what consumers are willing to pay for a good and what they actually pay. Consumer surplus is the measure of welfare benefit to the consumer.

Similarly, producer surplus is illustrated by the area on the graph to the left of the supply curve and below the equilibrium price. It is the difference between what goods cost to produce and the price at which they are sold. Producer surplus represents total profit earned by producers.

The shaded areas of the graph illustrate change in surplus resulting from the introduction of new supply into the market. As the supply curve shifts right, consumer surplus increases. This is represented by two shaded areas marked "CS Gain". At the same time, there is a change in producer surplus. As the equilibrium price falls, a resultant loss in producer surplus occurs, labeled "PS Loss". However, because equilibrium quantity increases as a result of the supply shift, new profit is generated for producers providing the additional supply. Total change in producer surplus is the net result.

To measure change in net benefit to social welfare resulting from shifts in supply, gains and losses from both producer and consumer surplus must be added. The sections that follow examine potential net changes to social welfare and equilibrium price resulting from the closure of MCAS Tustin and subsequent release of its 1500 acres into the local real estate market.

ASSUMPTIONS

To illustrate potential economic effects of various land use combinations, it is important to establish several assumptions about the current real estate market. These assumptions are approximations and are provided for illustrative purposes only. Throughout the analysis, the following statements are assumed true:

- The initial equilibrium price of land, regardless of use is approximately \$500,000/acre.

- The real estate market affected by the MCAS Tustin closure includes the California cities of Tustin, Irvine, Santa Ana, Orange, and Costa Mesa.
- The total market area is approximately 76,500 acres.
- Current use breakdown for the market area is approximately 50% residential, 30% commercial/industrial, and 20% public use (i.e. parks, schools, roads, etc.).
- Commercial/industrial uses include commercial office space, research and development businesses, retail stores, and both heavy and light industry.
- The environmental restoration cost for areas of MCAS Tustin planned for residential or public use is approximately \$50,000/acre. Areas to be fenced and not reused also have a restoration cost of approximately \$50,000/acre.
- The environmental restoration cost of commercial/industrial areas is approximately \$40,000.
- Approximately 20%, or 300 acres, of the total area will be conveyed at no cost to the community for public uses, regardless of the configuration of the remaining acres.

MINIMAL TRANSFER OF PROPERTY

The first situation examined in this analysis involves a minimal initial transfer of property to the community. If the government conveys 20% of the land for public use and defers sale or transfer of the rest, fencing it until environmental restoration is complete, the result is a loss to federal revenues.

As shown in Table I, net loss to federal revenue is equal to the cost of restoration. The DoD incurs the highest possible cleanup cost by exercising this land use option. Without a clear indication of future uses of the property, the DoD must assume the worst case scenario. Thus, cleanup costs are as high for fenced property as for residential. If some level of commercial/industrial reuse is assumed, restoration costs are reduced. However, to the extent that restoration is conducted independent of reuse option chosen, this policy is

inefficient from a social welfare perspective and costs more to the DoD.

Table I

Effect of Land Use Policy on Social Welfare: Current Situation (Dollars in Thousands)										
Land Use	Exist Acres x100	New Acres x100	Cleanup Costs /Acre	Land Price /Acre	Federal Sales Revenue	Federal Cleanup Costs	Net Federal Receipts	Gain in Consumer Surplus	Loss in Producer Surplus	Net Social Welfare Gain
Res	382.5	0	\$50	\$500	\$0	\$0	\$0	\$0	\$0	\$0
Com/Ind	229.5	0	\$40	\$500	\$0	\$0	\$0	\$0	\$0	\$0
Public	153	3	\$50			\$15,000	(\$15,000)	*a	*a	
Fenced		12	\$50			\$60,000	(\$60,000)	*b	*b	
Total	765.0	15			\$0	\$75,000	(\$75,000)			

MAXIMIZING SOCIAL WELFARE

The Reuse Planning Task Force is charged with the difficult job of determining the optimal land use mix for the MCAS Tustin property. If the Task Force is concerned with effects of reuse on social welfare, they should find the reuse alternative that maximizes net total surplus. For the purposes of illustration when considering this option, it is assumed that the DoD will sell 80% of the property to interested parties and convey the remaining 20% for public use.

^a Although consumer and producer surplus gains and losses result from the additional 300 acres of public land, this report does not estimate their value.

^b To the extent that fenced property may be converted into other uses in the future, consumer and producer surpluses can be estimated at the discounted value associated with such future conversion.

To maximize net total surplus, the price of goods sold is set equal to the marginal cost of production. Marginal cost, or incremental cost, is the increase in cost incurred as one additional unit is produced. For the DoD, the marginal cost of each acre is equal to environmental restoration cost. With no savings achieved or additional costs added as the number of acres cleaned increases, the marginal cost is constant for each type of use.

Using this, the price of residential property is set at \$50,000/acre and the price of commercial/industrial property at \$40,000/acre, representing the marginal cost of restoration for each. These prices are then used in a set of demand and supply functions for residential and commercial/industrial property to find the optimal quantity for each type of reuse.^c

Calculations reveal that to maximize total surplus by setting price equal to marginal cost, the DoD must introduce approximately 77,500 acres of residential property and approximately 38,700 acres of commercial/industrial property into the current real estate market. This presents a problem since available supply is limited to 1500 acres, 300 of which is set aside for public use.

Therefore, the DoD should find a way to maximize total surplus within their resource constraint. This is accomplished by equating opportunity cost of residential property to opportunity cost of commercial/industrial property within the 1500 acre constraint. As noted, the opportunity cost of property is equal to the net amount for which the property can be sold. In other words, it is the market price minus the marginal cost of restoration.

^c Appendix A contains a detailed explanation of procedures used.

When opportunity costs equal, the additional surplus, or marginal utility, gained from the sale of one type of property is the same as for the other. At this point total surplus is maximized.

Table II

Social Welfare Maximizing Level of Land Use: $P = MC$ of Restoration; $Pr - MCr = Pi - PCi$ (Dollars in Thousands)									
Land Use	New Acres x100	Cleanup Costs /Acre	Land Price /Acre	Federal Sales Revenue	Federal Cleanup Costs	Net Federal Receipts	Gain in Consumer Surplus	Loss in Producer Surplus	Net Social Welfare Gain
Res	2.5	\$50	\$499	\$124,636	\$12,500	\$112,136	\$55,636	(\$55,455)	\$112,318
Com/Ind	9.5	\$40	\$489	\$464,274	\$38,000	\$426,274	\$262,016	(\$256,654)	\$431,637
Public	3.0	\$50			\$15,000	(\$15,000)	*d	*d	(\$15,000)
Fenced	0.0	\$50			\$0	\$0			
Total	15.0			\$588,911	\$65,500	\$523,411	\$317,652	(\$312,108)	\$528,955

Table II illustrates the results of equating opportunity costs. Using 250 acres of residential property and 950 acres of commercial/industrial, opportunity costs are equated at \$449,000/acre. The market price of residential property drops slightly to \$499,000/acre while commercial/industrial prices fall to \$489,000/acre.

Net social welfare gain is the aggregate of net federal receipts, gain in consumer surplus and loss in producer surplus. In this illustration, total net gain to social welfare is maximized at \$528,955,000.

^d Changes in consumer and producer surplus for public use property are ignored in this example.

MAXIMIZING NET REVENUE

Prior to the announcement of the Jobs-Centered Property Disposal Plan, the DoD sold excess property not conveyed for public use at fair market value.¹⁰¹ At the time, it was in their best interest to maximize total net return on property sold. Funds generated from the sale could potentially be used to offset the cost of closing bases and relocating units to other areas.

The MCAS Tustin land-for-construction swap is a good example. Funds generated from the sale of the property were earmarked to pay for construction of new facilities at 29 Palms.

Since reuse of property affects both cost of restoration and market price, the DoD must find the right mix of reuse alternatives to maximize its return. When producers want to maximize total return, marginal revenue is set equal to marginal cost. Marginal revenue is the incremental increase in revenue generated by selling one additional unit of a good. Once marginal revenue is determined, the optimal quantity to be sold and the optimal price are calculated.

When marginal revenue for each type of land use at MCAS Tustin is equated to its corresponding marginal cost, the resulting quantity of land that must be supplied is greater than the quantity available. Using this method to maximize revenue, the DoD would need to sell approximately 38,700 acres of residential property and approximately 19,400 acres of commercial/industrial property.

The DoD must use an alternative method of maximizing net revenue within its 1500 acre constraint. This is accomplished in a manner similar to maximizing social welfare, setting the opportunity cost of residential property equal to that of commercial/industrial property.

Because the emphasis in this example is on net revenue, the opportunity cost is marginal profit. It is calculated by

subtracting the marginal cost of restoration from marginal revenue. In other words, it is the incremental increase in net profit generated by the sale of each type of land. When marginal profits are the same, the DoD is indifferent toward reuse alternatives and will not prefer the sale of one over the other. At this point net return is maximized.

Table III presents results using this approach for maximizing net revenue. Substituting 524 acres of residential and 676 acres of commercial/industrial property into the formula for equating marginal profits maximizes net revenues for the DoD at \$524,733,000. Residential land price drops to approximately \$497,000/acre and the approximate price of commercial/industrial becomes \$492,000/acre.

Table III

Fed's Net Receipt Maximizing Level of Land Use: $MC = MR$; $MRR - MCr = MRI - MCI$ (Dollars in Thousands)									
Land Use	New Acres x100	Cleanup Costs /Acre	Land Price /Acre	Federal Sales Revenue	Federal Cleanup Costs	Net Federal Receipts	Gain in Consumer Surplus	Loss in Producer Surplus	Net Social Welfare Gain
Res	5.24	\$50	\$497	\$260,404	\$26,200	\$234,204	\$116,799	(\$116,001)	\$235,001
Com/Ind	6.76	\$40	\$492	\$332,569	\$27,040	\$305,529	\$185,845	(\$183,129)	\$308,244
Public	3.0	\$50			\$15,000	(\$15,000)	*e	*e	(\$15,000)
Fenced	0.0	\$50			\$0	\$0			
Total	15.0			\$592,973	\$68,240	\$524,733	\$302,644	(\$299,131)	\$528,245

Comparing these results to those in Table II reveal that maximizing net revenue results in some degree of loss to net social welfare. As the quantity of residential property increases, the change in consumer and producer surplus grows larger. The converse is true as less commercial/industrial

^e Changes in surplus are ignored for public property.

property is introduced into the market. However, the net result is a decrease in both consumer surplus gains and producer surplus losses.

In addition, restoration costs increase with this land use mix. This would impact the operating budget of the Marine Corps hampering its ability to fund restoration efforts.

ZERO-COST LAND GRANT

The President's Community Reinvestment Program widens the scope of policies that allow conveyance of property for public use to include uses that generate economic benefit to the community. If the MCAS Tustin property is conveyed to the City, reuse decisions must include consideration of factors not previously examined by the Task Force. These factors include: whether to sell or lease the property; if the property is to be sold, whether to substantially reduce the price to stimulate growth or keep prices in the area stable; and in similar manner as the federal government, whether to maximize social welfare or revenues to the City.

Should the City decide to lease the land, a property management organization must be formed. This organization has potential to drain City resources if the property is not leased and remains vacant. If demand for commercial space remains low in the area, this may not be the best solution for the City.

Selling the land may be more cumbersome to the City than leasing. Decisions on property configuration are based on an objective that is important to community leaders. This objective could be monetary, political, or anything that affects reuse decisions. For the purposes of this hypothetical illustration, it is assumed that City leaders have four choices. First, they can fence the property until demand in the area increases. Second, they can give the land

to developers at no cost. Third, they can maximize City revenues. Finally, they can maintain the same approximate land mix present in the current five city market area.

If the City fences the property, the DoD still bears environmental restoration costs, creating a loss to net receipts. In addition, the City takes on caretaker responsibilities, adding to their infrastructure support requirements without increasing revenue generating activities.

Offering the property to developers at no cost presents problems for the City similar to those caused when price was equal to the marginal cost of restoration. Available supply of land is not great enough to satisfy demand at this price level. In addition, current land owners are angered by resultant drops in property values.

The City may choose base reuse alternatives that maximize its total revenue. This option is similar to maximizing net federal revenue except that marginal cost to the City is zero. The DoD remains responsible for cleaning environmental contamination it caused on the property after transfer is complete. Therefore, the City can maximize its revenue by equating the marginal revenues of residential and commercial/industrial property. As before, this is the point of indifference between the two land uses.

Table IV illustrates results of this situation. Setting residential property levels at approximately 806 acres and commercial/industrial at 394 acres maximizes City revenue at \$594,379,000. At this level, however, restoration costs to the federal government increase and social welfare is further reduced.

Table IV

Zero Cost Land Grant to the City: City Revenue Maximizing Level of Land Use: $MR = 0$; $MRR = MRR_i$ (Dollars in Thousands)									
Land Use	New Acres x100	Cleanup Costs /Acre	Land Price /Acre	City Land Sales Revenue	Federal Cleanup Costs	Total Net Receipts (City&Fed)	Gain in Consumer Surplus	Loss in Producer Surplus	Net Social Welfare Gain
Res	8.07	\$50	\$495	\$399,224	\$40,500	\$358,924	\$179,950	(\$178,063)	\$360,811
Com/Ind	3.94	\$40	\$495	\$195,155	\$15,760	\$179,395	\$107,958	(\$107,035)	\$180,317
Public	3.0	\$50			\$15,000	(\$15,000)	*f	*f	(\$15,000)
Fenced	0.0	\$50			\$0	\$0			
Total	15.0			\$594,379	\$71,060	\$523,319	\$287,907	(\$285,098)	\$526,128

If the City sets the land use mix approximately equal to the mix of current land use, they will neither maximize social welfare nor revenues. As Table V shows, net social gain increases slightly from the revenue maximizing example. However, the gain is not maximized. In addition, revenues are reduced and cleanup costs increase.

Table V

Zero Cost Land Grant to the City: City's Anticipated Land Use (Dollars in Thousands)									
Land Use	New Acres x100	Cleanup Costs /Acre	Land Price /Acre	City Land Sales Revenue	Federal Cleanup Costs	Total Net Receipts (City&Fed)	Gain in Consumer Surplus	Loss in Producer Surplus	Net Social Welfare Gain
Res	7.5	\$50	\$496	\$371,731	\$37,500	\$334,230	\$167,393	(\$165,759)	\$335,864
Com/Ind	4.5	\$40	\$495	\$222,593	\$18,000	\$204,593	\$123,384	(\$122,180)	\$205,796
Public	3	\$50			\$15,000	(\$15,000)	*f	*f	(\$15,000)
Fenced	0	\$50			\$0	\$0			
Total	15			\$594,324	\$70,500	\$523,824	\$290,776	(\$287,939)	\$526,661

^f Changes in surplus are ignored for public property.

The examples above are not intended to portray actual outcomes of decisions made or those under consideration at MCAS Tustin. They simply illustrate that the consequences of such decisions can be predicted and should be included in the base reuse planning process.

Net social benefit optimization appeals most to the economist. Elected officials may not perceive this goal as paramount due to special interest pressures exerted within the community. However, if military and political leaders are interested in making socially conscious decisions benefit optimization should be considered.

SUCSESSES, PROBLEMS AND CONCERNS

During the base reuse planning process at MCAS Tustin thus far, numerous successes and difficulties have been experienced. Several unresolved issues and concerns are present or may be identified. This chapter outlines these areas and notes lessons from the Tustin experience that may be helpful to future base closures.

SUCCESSFUL ENDEAVORS

Forward Looking Decisions

The most significant outcome of the MCAS Tustin reuse planning process has been the forward looking approach taken by the community and the Marine Corps toward the McKinney Act and the EIR/EIS preparation. As details of the President's Community Reinvestment Program are released, it is obvious that the planning conducted in these two areas was ahead of its time. The Reuse Planning Task Force decision to identify homeless assistance agency requirements well in advance of the McKinney Act screening demonstrates the community's concern for speedy resolution to reuse issues. In addition, incorporating those requirements into the final reuse plan recognizes the reality of the homeless problem in the Orange County area.

Because the McKinney Act screening is normally conducted no earlier than eighteen months prior to release of the property, its results may have potentially disruptive effects on the reuse plan. The Tustin Reuse Task Force has taken a major step toward averting this disruption. Although the City's informal screening is non-binding, the Task Force

identified the facilities most likely to be requested by homeless assistance agencies.

Similarly, the preparation of a joint EIR/EIS by the City and the Marine Corps highlights the concern of both parties to expedite reuse planning and conserve scarce funding resources. Although the Marine Corps' original interest in accelerated reuse planning has changed, it is still in their best interest to complete the final reuse plan early.

Documentation required by current environmental laws can take up to four years to complete. Preparing a single EIR/EIS not only saves time and money, it takes the focus of environmental restoration away from extensive studies and puts it on actual cleanup. Speedy restoration enables local communities to begin economic recovery sooner and minimizes outlay of Marine Corps O&M funds.

Joint Task Force Approach

The joint task force approach used by the community and the Marine Corps has been another successful area of the planning process. Early establishment of the Reuse Planning Task Force, with representation from various segments of the community, including the military, have paved the way for cooperativeness and good relations between City and base officials. Had the organization consisted of only community political leadership, the potential for disagreement would have been much greater.

The task force approach successfully fostered cooperation by recognizing the mutual benefits of both timely reuse plan completion and early zoning decisions. With zoning in place, developers are more likely to be interested in the property. As a result, new businesses come into the community sooner generating greater tax revenues. In addition, the interest created enables the Marine Corps to transfer the property as soon as appropriate levels of restoration are complete.

Open communication between the City and the Marine Corps is another result of the task force approach. In a project of this magnitude, a breakdown of communications can slow or halt progress toward stated objectives. According to City and Marine Corps officials, cooperation and communication between the two entities has been exemplary. The MOU reflected this spirit, documenting the agreement to share information in a timely manner.

Marine Corps officials have attempted to keep the information flow timely and accurate. City officials have had access to the base and are kept up to date on changing developments in BRAC decisions. Because of this open atmosphere, problem resolution is handled in most cases with a single telephone call.

BRAC Office Establishment

Establishing a Base Realignment and Closure Office to handle all BRAC matters for both MCAS Tustin and MCAS El Toro provides a successful method of tackling several problems at one time. First, it establishes a single point of contact for BRAC issues within the Marine Corps organization. This is helpful to community officials who rely on the military as an important source of information. By designating one office, with its primary focus on BRAC matters, the flow of information is simplified and the risk of passing misinformation is minimized. Funneling all BRAC information through the BRAC office enables officials to filter out rumor and innuendo.

The single point of contact for BRAC matters also is helpful to military officials. When decisions must be made regarding base closures by the Commanding General or others in the chain of command, a dedicated staff is available to assist. Personnel in the BRAC office become the recognized

experts on BRAC matters, and are unencumbered by other duties which potentially delay progress on BRAC issues.

Second, personnel in the BRAC office can foster long term, trusting relationships with community leaders and establish positive public relations with the community at large. If these relationships exist, compromises between parties are more likely when disagreements occur over details of base reuse. Without community trust, an adversarial relationship may result, wasting time, energy, and resources.

In addition, the BRAC office is planning to perform caretaker duties after the base closes. BRAC office personnel will manage the property while environmental restoration is ongoing and will be present until the last parcel is transferred. This demonstrates to the community the Marine Corps' concern for their well being, even after military interest in the base changed significantly with the BRAC-93 decision. Using BRAC personnel, familiar to the community with established relationships, in the caretaker role after the base closes can help allay some public concerns over the military's departure.

PROBLEM AREAS

Although the MCAS Tustin reuse planning experience has generally been positive, there are a few problem areas to be addressed.

Environmental Studies

Environmental studies are a source irritation to Tustin reuse planners. The pace at which studies are conducted at MCAS Tustin is relatively slow. Studies for the MCAS El Toro installation restoration program are much farther along than those for MCAS Tustin, even though the Tustin base has been identified for closure for over two years. The primary causes of this disparity are the magnitude of contamination and

inclusion of MCAS El Toro on the National Priorities List (NPL). Bases with a higher degree of contamination and those on the NPL get the highest priority. Compared to other bases in the area, MCAS Tustin has very little contamination. In addition, it is not on the NPL.

Funding for environmental studies follows this same logic. The worst areas receive first funding for studies and remediation. With defense budgets declining each year, dollars available for environmental restoration are becoming more scarce. This situation delays environmental studies for Tustin even further and is indicative of the inconsistency between environmental laws and environmental funding. Legislation requires DoD to give environmental cleanup a high priority, however funding levels assigned to environmental programs are not consistent with the priority levels.

When environmental studies are slowed or delayed, reuse plans and their supporting studies are completed without the benefit of accurate information. This defeats the purpose of completing reuse planning early in the base closure process. Results of environmental studies may reveal areas of contamination incompatible with intended reuse, or too costly to clean to acceptable standards. As a consequence, reuse plans made early in the process may need revalidation prior to implementation. This requires additional time and resources not available in the community.

Marine Corps/Navy Relationship

One surprising problem observed during this research was the rivalry between the Marine Corps and SWDIV over final reuse decision making authority. As noted earlier, the Marine Corps contracted with SWDIV for real estate and property disposal services. However, it still considers itself the property owner. The Navy, on the other hand, argues that the

Marine Corps is simply a tenant on the property and final authority rests with them.

The issue is further complicated by the establishment of the BRAC office at SWDIV. This organization is part of a new structure at SWDIV to deal with the increasing number of base closures. Areas of responsibility, as well as internal and external organizational relationships, are still being worked out in this organization.

As SWDIV becomes increasingly involved in the closure process at MCAS Tustin, it may become more difficult for the local community to know who to believe if conflicting information is presented. This problem may hinder communication between the City and the Marine Corps and undermine the existing good relationship. Therefore, clear lines of authority must be drawn and an understanding between the Navy and Marine Corps must be reached to resolve this problem.

Short Range Perspective

Although the City of Tustin has been forward looking in their approach to reuse planning, they have taken a short range perspective on other issues. First, in spite of their vision statement adopted early in the process, the City has not recognized the necessity to create demand for the Tustin property. The three reuse alternatives presented to the Task Force by the consultant included plans which would attract new businesses and residents to the area in a live-where-you-work arrangement. Building a waterfront area and a circular roadway system that closely integrates businesses with residential sections of the property are two examples of this demand creating approach.

The City chose to reject these ideas and instead are favoring reuse plans that closely resemble the current composition of the community. The problem is that a shortage

of demand already exists for all types of property in the area. Without some unique feature to set the new property apart from other communities, redevelopment of the area is not likely to occur as fast as community leaders hopes.

In addition, planning higher concentrations of business and residential areas to achieve a higher tax base may not necessarily increase City revenue. Highly concentrated areas require additional infrastructure support. The support structure is typically funded early in the redevelopment process. If these areas are vacant, no revenue is generated and the extra infrastructure creates a drain on City resources. Creating more parks or open areas, however, requires less infrastructure and can attract developers and buyers to the area.

Secondly, the City does not appear prepared to deal with either an accelerated, delayed, or canceled departure of the Marine Corps from MCAS Tustin. If BRAC funding is depleted, the scheduled move to NAS Miramar may be either accelerated, to take advantage of currently available funds, or delayed until other funding sources can be identified. In addition, a BRAC-95 decision could potentially cancel the move altogether. The City has not planned for these contingencies and there is no evidence that this planning is being considered. Ignoring these possibilities does not seem prudent as defense budgets are downsized.

CONCERNS AND UNRESOLVED ISSUES

With the continued downsizing of the Department of Defense, base closures will continue for the foreseeable future. Current legislation extends the base closure timeline to the year 1999 and the next scheduled round of base closure decisions will push it into the next century.¹⁰² Because base closure issues affect a wide variety of communities

across the country, each case presents its own set of unique challenges.

Consequently, the following questions of concern are recommended for further research:

- What impacts do higher levels of environmental contamination have on base reuse planning at MCAS El Toro?
- What impacts do contested jurisdictional lines have on base reuse planning at MCAS El Toro?
- Should the Marine Corps be required to include personal property and personnel support equipment in its disposal plan for bases at which units are relocating? What are the impacts to Marine Corps O&M funding?
- If property conveyed for public benefit is returned to the government, who should handle its subsequent disposal, e.g., DoD, DoN or GSA?
- What impacts do improved contamination detection technology and increasingly higher environmental standards have on the government's responsibility for conducting and funding environmental restoration on former military bases?
- Does the President's Community Reinvestment Program actually speed the base reuse process and economic development of affected communities?

SUMMARY

MCAS Tustin was the first major Marine Corps base to close as a result of BRAC legislation. It has become a test case for the Marine Corps to provide lessons for future closures. Clearly, base reuse planners at MCAS Tustin have been very successful at organizing their efforts. In addition, keeping focused on the reuse plan in the face of major changes has been a strength of the Task Force.

The Marine Corps faces greater challenges with the closure of MCAS El Toro and relocation to NAS Miramar. If lessons are gleaned from the Tustin experience and put to use in subsequent closure processes, the Marine Corps will be well on its way to completion of another successful mission.

APPENDIX A - DETAILED ECONOMIC ANALYSIS

This appendix provides detailed explanations of procedures and calculations used in the economic analysis presented in the main body of the thesis. Implications of each alternative offered in this appendix are contained in the chapter entitled Economic Impacts of Property Disposal.

GENERAL EFFECTS OF INCREASING SUPPLY

When calculating the effects of increasing supply, it is important to first identify functions used to find points along the original supply and demand curves. These functions are the basis for all other calculations. The implicit demand curve is represented by the linear function:

$$P_{Dk} = A_k - B_k Q_{Dk}$$

The implicit supply curve is represented by the linear function:

$$P_{Sk} = A_{ks} + B_{ks} Q_{Sk}$$

Solving each equation for quantity gives:

$$Q_D = \frac{A_k - P_D}{B_k} \quad \text{and} \quad Q_S = \frac{P_S - A_{ks}}{B_{ks}}$$

To find the equilibrium price, Q_D is set equal to Q_S and the equation is solved for price.

When additional supply is added, the supply curve shifts to the right. Points along the new supply curve are found using the equation:

$$Q_S = \frac{P - A_{ks}}{B_{ks}} + X$$

The new equilibrium price is determined by again setting Q_D equal to Q_S :

$$\frac{A_k - P}{B_k} = \frac{P - A_{ks}}{B_{ks}} + X$$

Finding the common denominator gives:

$$(A_k - P) B_{ks} = (P - A_{ks}) B_k + (B_k B_{ks}) X$$

Solving for price gives the new equilibrium price equation:

$$P = \frac{A_k B_{ks} + A_{ks} B_k - B_k B_{ks} X}{B_k + B_{ks}}$$

Table VI defines the variables used in these calculations.

Table VI

Variable Definitions	
P_0	Demand Price
P_s	Supply Price
Q_0	Quantity Demanded
Q_s	Quantity Supplied
A_d	Demand Curve Vertical Intercept
A_s	Supply Curve Vertical Intercept
B_d	Slope of the Demand Curve
B_s	Slope of the Supply Curve
k	residential or industrial

Figure 2 illustrates the effects of adding new supply to existing markets. As the supply curve shifts to the right equilibrium price falls and equilibrium quantity increases. In addition, there are changes to both consumer and producer

surplus. Consumer surplus increases by the amount represented by the shaded area (P, A, B, P') . Producer surplus is reduced by the amount in the shaded area (P, A, C, P') . At the same time, new profit is generated by increased supply. This profit is shown on the graph as area (Aks, C, B, Aks') . The aggregate of these areas is the net change to social welfare resulting from the additional supply.

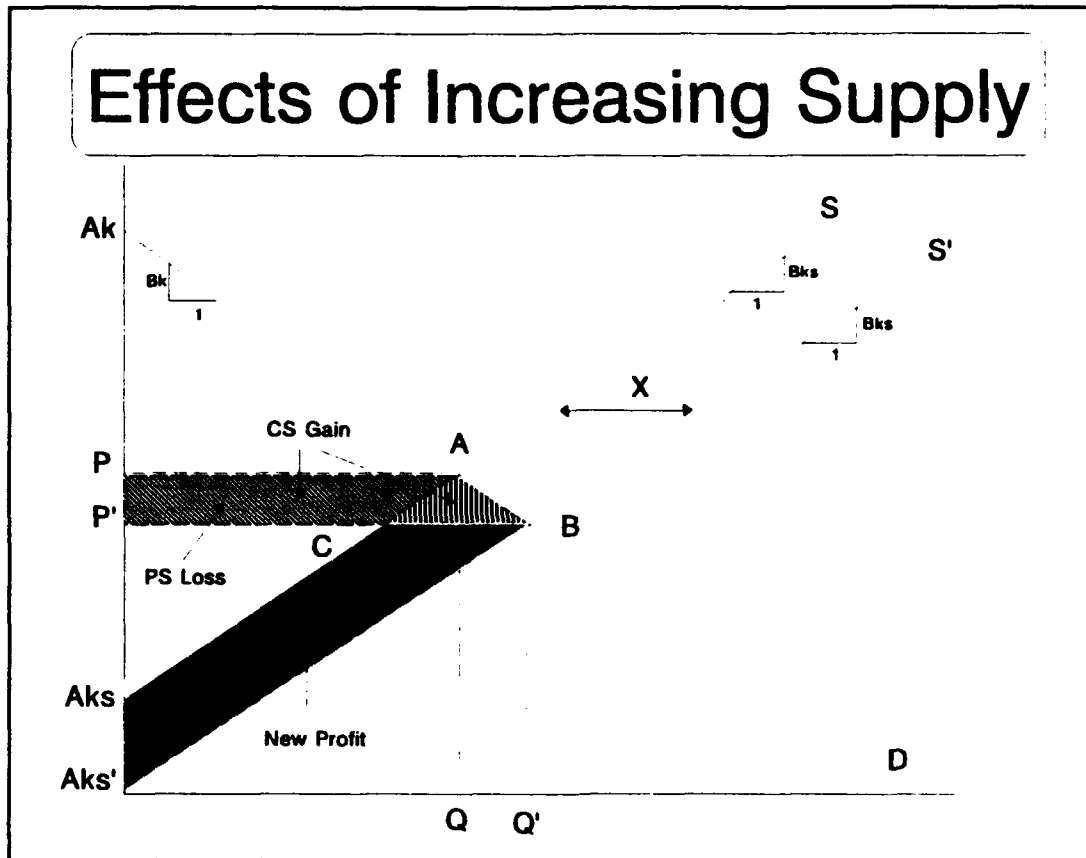


Figure 2

Change in consumer surplus is found by subtracting total consumer surplus prior to the shift in supply from the new total consumer surplus.

This can be expressed as:

$$\Delta CS = \frac{1}{2} (A_k - P') \left(\frac{A_k - P'}{B_k} \right) - \frac{1}{2} (A_k - P) Q$$

Simplifying this equation gives:

$$\Delta CS = \frac{\frac{(A_k - P')^2}{B_k} - (A_k - P) Q}{2}$$

Similarly, change in producer surplus can be calculated by subtracting the new total producer surplus from the original total producer surplus.

$$\Delta PS = \frac{1}{2} (P - A_{ks}) Q - \frac{1}{2} (P' - A_{ks}) \left(\frac{P' - A_{ks}}{B_{ks}} \right)$$

Simplifying this equation gives:

$$\Delta PS = \frac{(P - A_{ks}) Q - \frac{(P' - A_{ks})^2}{B_{ks}}}{2}$$

Finally, new profit is calculated by multiplying the quantity of new supply by the new equilibrium price and subtracting the cost of production. For MCAS Tustin, new profit is found by multiplying the new acre quantity by the new equilibrium price and subtracting the cost of restoration.

ASSUMPTIONS

Prior to analyzing various MCAS Tustin land use possibilities, assumptions must be made to establish a starting point for calculations. Table VII provides basic assumptions used throughout this analysis. The assumptions outlined in the main body of the thesis are also applied.

Table VII

Residential Land Use Assumptions				Comm/Ind Land Use Assumptions			
Ar	Ars	Br	Brs	AI	AI _s	BI	BI _s
1000	100	1.3072	1.0458	1000	-100	2.1786	2.6144
Eq Price (\$000)		Eq Quantity (00)		Eq Price (\$000)		Eq Quantity (00)	
\$500		382.5		\$500		229.5	

Figure 3 graphically represents assumptions made about the residential property market prior to increasing supply. Similarly, Figure 4 represents assumptions about the commercial/industrial property market.

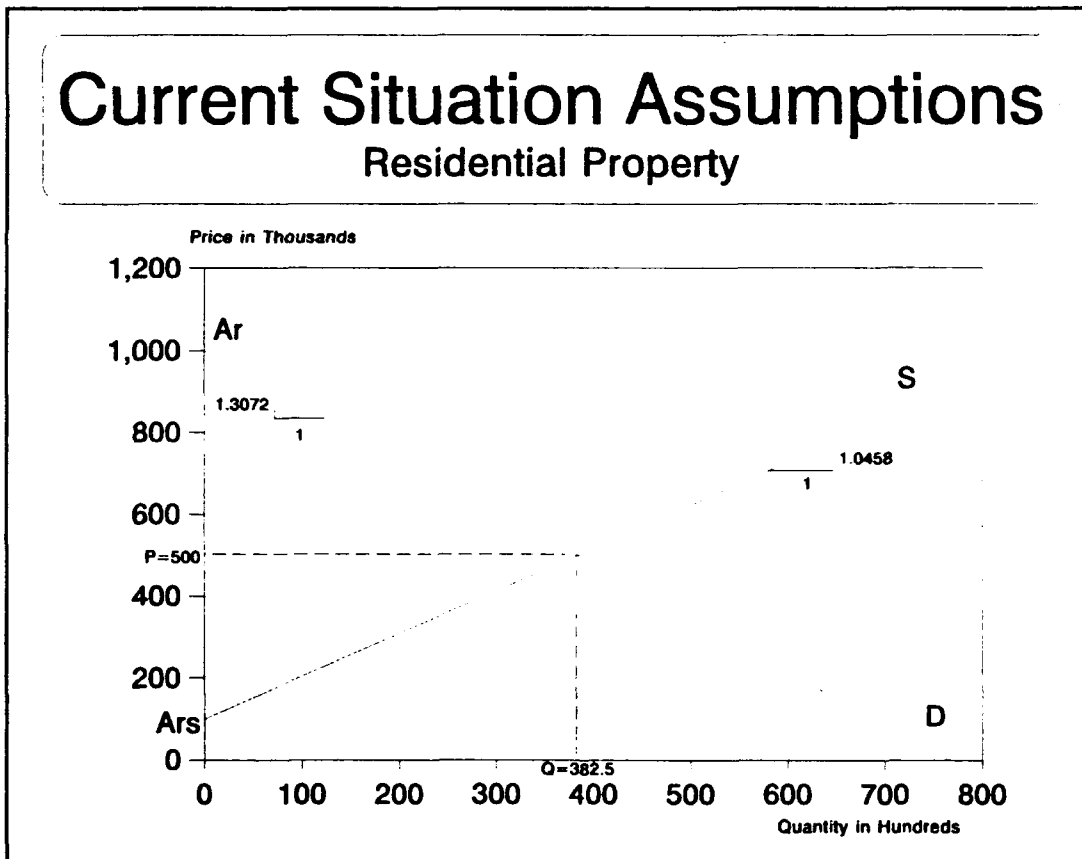


Figure 3

Current Situation Assumptions

Commercial/Industrial Property

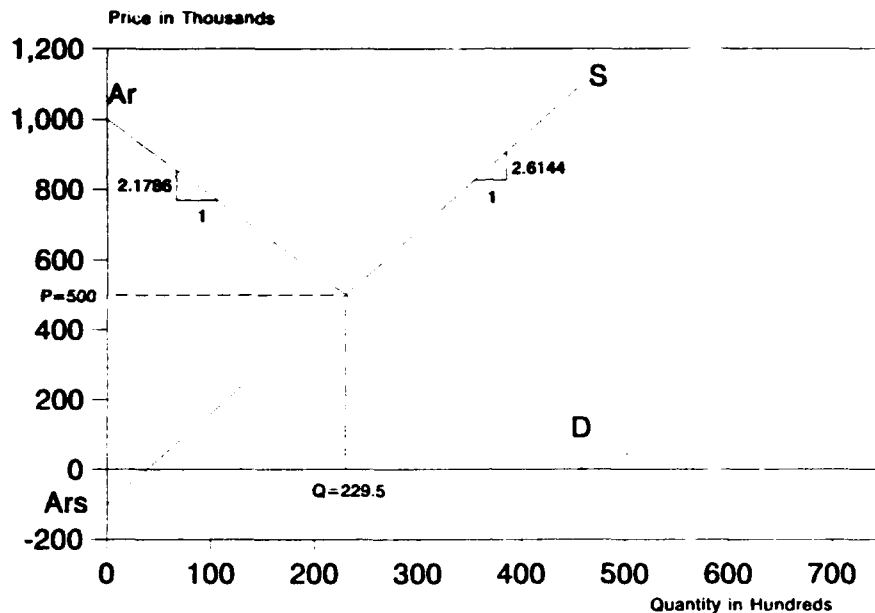


Figure 4

MAXIMIZING SOCIAL WELFARE

To maximize social welfare, economists set the price of goods sold equal to the marginal cost of production. For MCAS Tustin, the marginal cost of production is equal to the cost of environmental restoration. To find the number of acres required to maximize social welfare using this method, the new equilibrium price equation, derived above, can be used. For each type of reuse, residential and commercial/industrial, the marginal cost of restoration is substituted for price and the equations are solved for X .

For residential property, the equation is:

$$P = \frac{A_I B_{Is} + A_{Is} B_I - B_I B_{Is} X}{B_I + B_{Is}}$$

Solving for X algebraically gives the equation:

$$X = \frac{P(B_I + B_{Is}) - (A_I B_{Is} + A_{Is} B_I)}{-(B_I B_{Is})}$$

When \$50,000 is substituted into the equation for the price, and the constants in Table VII are used for the other variables, the result shows that approximately 77,500 acres are required.

Similarly, the price equation for commercial/industrial land is:

$$P = \frac{A_i B_{is} + A_{is} B_i - B_i B_{is} X}{B_i + B_{is}}$$

The subsequent equation for X is:

$$X = \frac{P(B_i + B_{is}) - (A_i B_{is} + A_{is} B_i)}{-(B_i B_{is})}$$

When the marginal cost of restoration for commercial/industrial property, \$40,000, is substituted in this equation along with the constants, the result reveals that approximately 38,700 acres are required.

The reuse planners at MCAS Tustin are constrained to a total of 1500 acres, 300 of which are earmarked for public use. Therefore, another method of maximizing social welfare must be found. This is accomplished by equating the opportunity costs for each type of use. The opportunity cost for the property in this case is equal to the market price minus the marginal cost of restoration:

$$P_r - MC_r = P_i - MC_i$$

Substituting the equations for price and the marginal costs for each reuse option into this equation gives:

$$\frac{A_r B_{rs} + A_{rs} B_r - B_r B_{rs} X_r}{B_r + B_{rs}} - 50,000 = \frac{A_i B_{is} + A_{is} B_i - B_i B_{is} X_i}{B_i + B_{is}} - 40,000$$

Setting X_r equal to 250 acres and X_i equal to 950 acres solves this problem within the 1500 acre constraint. Using these values for X in the price equations, the new equilibrium price for residential is approximately \$499,000/acre and \$489,000/acre for commercial/industrial. This land use mix equates the opportunity costs at approximately \$449,000/acre.

Using constants from the table and the new equilibrium prices found above, changes to consumer and producer surpluses are calculated for each type of land use. When added to net revenue from the sale of land, the result is the net change to social welfare.

MAXIMIZING NET REVENUE

If the government is interested in maximizing net revenue, it must take a slightly different approach. To maximize revenue, marginal revenue is set equal to marginal cost. The total revenue function is expressed as:

$$TR = P \times Q$$

Substituting the basic equation for price gives the equation:

$$TR = (A_k - B_k Q) Q$$

When simplified the function becomes:

$$TR=A_kQ-B_kQ^2$$

Taking the first derivative of the total revenue function gives the equation for marginal revenue.

$$MR=A_k-2B_kQ$$

Once the marginal revenue function is determined, substituting marginal cost for marginal revenue solves for the maximizing quantity. When this quantity is found, the revenue maximizing price is determined.

Figure 5 graphically illustrates how to determine the revenue maximizing price and quantity by equating marginal cost and marginal revenue.

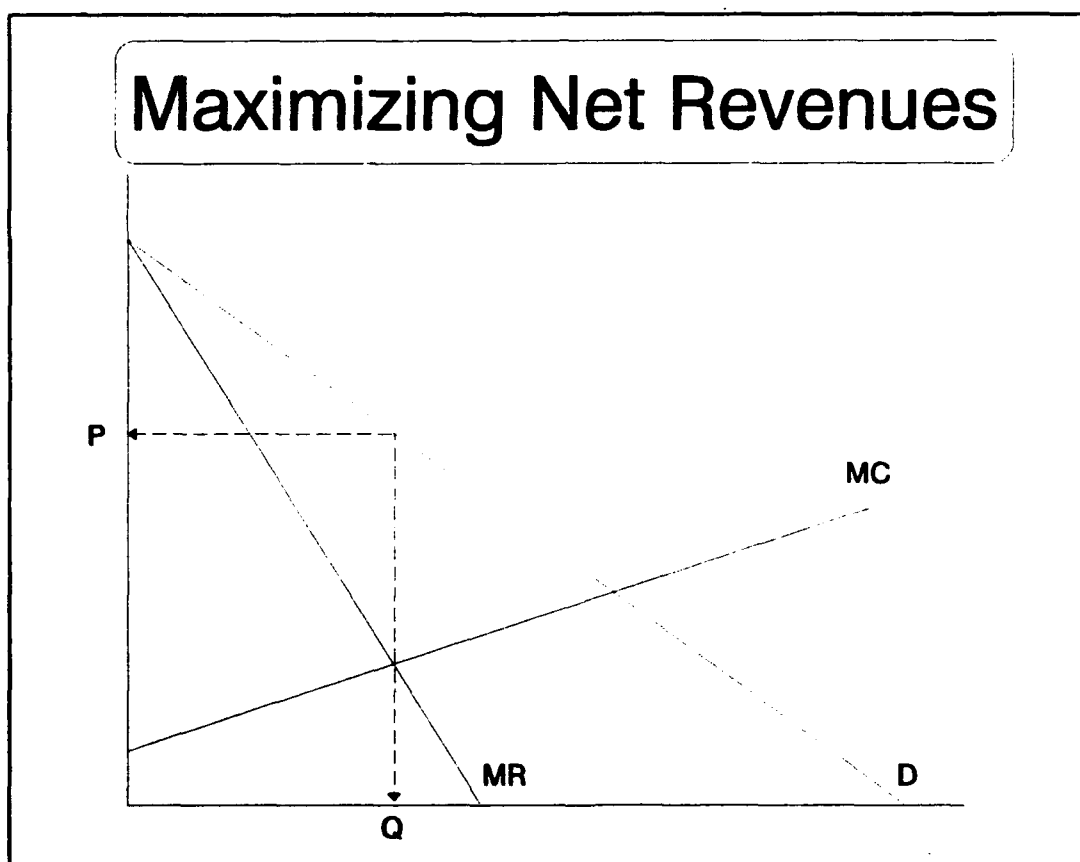


Figure 5

For this example, however, it is the marginal revenue of the additional supply that is of concern. The expanded price equation must be used in the total revenue function to determine marginal revenue.

The resulting equation is:

$$TR = \frac{A_k B_{ks} + A_{ks} B_k - B_k B_{ks} X_k}{B_k + B_{ks}} \times X_k$$

Simplifying gives:

$$TR = \frac{A_k B_{ks} X_k + A_{ks} B_k X_k - B_k B_{ks} X_k^2}{B_k + B_{ks}}$$

Taking the first derivative of this equation gives the marginal revenue function:

$$MR = \frac{A_k B_{ks} + A_{ks} B_k - 2 B_k B_{ks} X_k}{B_k + B_{ks}}$$

Solving for X_k converts the marginal revenue function to:

$$X_k = \frac{A_k B_{ks} + A_{ks} B_k - MR (B_k + B_{ks})}{2 B_k B_{ks}}$$

Setting marginal revenue equal to the marginal cost of restoration for each type of land use results in optimal quantities of land required to maximize net revenue. For the MCAS Tustin scenario, the outcome reveals that the quantity of land required is greater than the 1500 acres available. The quantity of residential property needed is approximately 38,700 acres and the commercial/industrial quantity is approximately 19,400 acres.

Again, the Tustin planners must find an alternative method of maximizing net revenue. This is accomplished by equating the marginal profits of each reuse option. Marginal profit is calculated by subtracting marginal cost from marginal revenue.

The marginal revenue function derived above and marginal restoration costs are used in this equation.

$$M\pi_r = M\pi_i$$

$$MR_r - MC_r = MR_i - MC_i$$

$$\frac{A_r B_{rs} + A_{rs} B_r - 2B_r B_{rs} X_r}{B_r + B_{rs}} - 50 = \frac{A_i B_{is} + A_{is} B_i - 2B_i B_{is} X_i}{B_i + B_{is}} - 40$$

Within the acreage constraint, this equation is solved substituting 524 acres for X_r and 676 acres for X_i . Using these values in the price equation gives new equilibrium prices of approximately \$497,000/acre for residential and \$492,000/acre for commercial/industrial property. Net revenues are maximized at approximately \$524,733,000.

ZERO-COST LAND GRANT

If the City of Tustin is given a zero-cost land grant, community leaders have several additional factors to consider when planning reuse. Assuming the decision is made to sell the land, the selling price must be decided. The City may decide to lower the price substantially, maximize City revenues, or simply maintain the current land use mix ratio in the new areas.

Setting price equal to zero presents the same problems discovered when price was set equal to the marginal cost of restoration. Using the equation for X_k ,

$$X = \frac{P(B_k + B_{ks}) - (A_k B_{ks} + A_{ks} B_k)}{-(B_k B_{ks})}$$

price is set equal to zero, resulting in the following function:

$$X = \frac{-(A_k B_{ks} + A_{ks} B_k)}{-(B_k B_{ks})}$$

When the constants are substituted into this equation, resulting values for X are predictably high. The residential quantity required is approximately 86,100 acres and the commercial/industrial quantity is approximately 42,100 acres. Again the 1500 acre constraint prevents setting price at this low level.

If the City decides to maximize its revenue, the maximizing quantity for each type of land is found by setting marginal revenue equal to marginal cost. Using the marginal revenue equation, solved in terms of X , gives the following:

$$X_k = \frac{A_k B_{ks} + A_{ks} B_k - MR(B_k + B_{ks})}{2B_k B_{ks}}$$

Since the marginal cost of restoration for the City is zero, marginal revenue is equal to zero, resulting in:

$$X_k = \frac{A_k B_{ks} + A_{ks} B_k}{2B_k B_{ks}}$$

This method of maximizing revenue has the same result for the City as it did for the federal government. The quantity of land required to meet demand generated is inadequate given the 1500 acre constraint. Therefore, to maximize revenues, the City must equate the marginal revenues for each type of property.

$$MR_r = MR_i$$

Using the equation for marginal revenue found above gives:

$$\frac{A_r B_{rs} + A_{rs} B_r - 2B_r B_{rs} X_r}{B_r + B_{rs}} = \frac{A_i B_{is} + A_{is} B_i - 2B_i B_{is} X_i}{B_i + B_{is}}$$

Within the constraints, this equation is solved when X_r equals to 806 acres and X_i equals 394 acres. At this point, the City sets the new equilibrium price for both types of property at approximately \$495,000/acre and maximizes its total revenue.

If the City decides to maintain current land mix ratios for the new acreage, they neither maximize social welfare nor total revenues. Using the equation for P_k :

$$P = \frac{A_k B_{ks} + A_{ks} B_k - B_k B_{ks} X}{B_k + B_{ks}}$$

and setting X_r equal to 750 acres and X_i equal to 450 acres, the new equilibrium price for residential property is approximately \$496,000/acre and \$495,000/acre for commercial/industrial property.

The change in consumer and producer surplus for each of these hypothetical illustrations can be calculated using formulas derived in the first section of this appendix. None of the examples presented as City alternatives maximize change in overall social welfare. If the City is interested in this option, they must choose the land use mix calculated to maximize social welfare for the federal government.

APPENDIX B - ABBREVIATIONS AND ACRONYMS

ARARS	Applicable or Relevant and Appropriate Requirements
Base Closure Act	Defense Base Closure and Realignment Act of 1990
BRAC	Base Realignment and Closure
BRAC-91	The second round of BRAC actions
BRAC-93	The third round of BRAC actions
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERFA	Community Environmental Response Facilitation Act of 1992
CESF	California Exposition and State Fair
The City	The City of Tustin, California
The Commission	The Defense Secretary's Commission on Base Realignments and Closures
DoD	Department of Defense
DoN	Department of the Navy
DTSC	California Department of Toxic Substance Control
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency

ERA	Economics Research Associates
GSA	General Services Administration
HNTB	Howard Needles Tammen & Bergendoff Corporation
HQMC	Headquarters, United States Marine Corps
HUD	Department of Housing and Urban Development
IR	Installation Restoration
MCAF	Marine Corps Air Facility
MCAS	Marine Corps Air Station
MCAS El Toro . .	Marine Corps Air Station, El Toro, California
MCAS Tustin . .	Marine Corps Air Station, Tustin, California
McKinney Act . .	Stewart B. McKinney Homeless Assistance Act of 1987
MOU	Memorandum of Understanding
NAS	Naval Air Station
NAVFAC	Naval Facilities Engineering Command
NEPA	National Environmental Policy Act
NPL	National Priorities List
OCFD	Orange County Fire Department
OEA	Office of Economic Adjustment
O&M	Operations and Maintenance
R&D	Research and Development

SecDef Secretary of Defense

SWDIV Southwest Division, Naval Facilities
Engineering Command

3RD MAW Third Marine Air Wing

29 Palms . . . Marine Corps Base, Twentynine Palms,
California

USMC United States Marine Corps

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